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THE

INDIAN YEAR BOOK

1918.

A STATISTICAL AND HISTORICAL ANNUAL OF
THE INDIAN EMPIRE, WITH AN
EXPLANATION OF THE
PRINCIPAL TOPICS
OF THE DAY.

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EDITED BY

SIR STANLEY REED, LL.D.

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FIFTH YEAR OF ISSUE

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PREFACE.

In presenting to subscribers the fifth issue of the Indian Year Book the Editor ventures to ask their kindly tolerance towards any shortcomings which may be manifest.

This edition has been issued in circumstances of very great difficulty. There has been the pressure on all classes in India induced by the war and in addition the heavy demands set up by the Indian Defence Force Act. This has not only reacted on the Editor and his immediate colleagues but upon all that large band of contributors throughout India on whose co-operation the success of such a volume mainly depends.

The Editor desires to express his grateful thanks to those who amid these intense preoccupations have made the time to contribute to the volume, and is confident that subscribers will readily appreciate the difficulties which have caused some gaps in these ranks.

So far as possible in these circumstances a serious attempt has been made to embody in the Year Book all the great developments in the third year of the war. These will be found grouped under three main heads—the Progress of events in Mesopotamia, including the brilliant recovery from the loss of Kut-el-Amara and the capture of Baghdad; the development of political ambitions in India reflected in the visit of the Secretary of State for India and his colleagues to consult with His Excellency the Viceroy and all public bodies on the steps to be taken after the war to give effect to the declaration of the Imperial Government that the goal of British administration in India is full self-government within the Empire and that substantial steps to this end will be taken at the close of the war; the remarkable financial and economic changes in India, especially in the direction of finance, currency and trade.

The public continue to respond to the invitation to join in the task of editing the Indian Year Book by suggesting improvements and developments which have been embodied in this issue so far as possible. The invitation is continued in the confident belief that only by the co-operation of the public can this Year Book be maintained as the standard work of reference on the Indian Empire.

THE EDITOR.

CALENDAR FOR 1918.

January.

S.	..	6	13	20	27	
M.	...	7	14	21	28	...
Tu.	1	8	15	22	29	.
W.	2	9	16	23	30	...
Th.	3	10	17	24	31	..
F.	4	11	18	25	...	...
S.	5	12	19	26	...	...

February.

S.	...	3	10	17	24	...
M.	...	4	11	18	25	...
Tu.	...	5	12	19	26	...
W.	...	6	13	20	27	...
Th.	...	7	14	21	28	...
F.	1	8	15	22	...	...
S.	2	9	16	23		..

March.

S.	...	3	10	17	24	31
M.	...	4	11	18	25	
Tu.	...	5	12	19	26	...
W.	...	6	13	20	27	...
Th.	...	7	14	21	28	...
F.	1	8	15	22	29	...
S.	2	9	16	23	30	...

April.

S.		7	14	21	28	...
M.	1	8	15	22	29	...
Tu.	2	9	16	23	30	...
W.	3	10	17	24	...	..
Th.	4	11	18	25	...	...
F.	5	12	19	26	...	...
S.	6	13	20	27	...	...

May.

S.	...	5	12	19	26	...
M.	...	6	13	20	27	...
Tu.	...	7	14	21	28	...
W.	1	8	15	22	29	...
Th.	2	9	16	23	30	...
F.	3	10	17	24	31	...
S.	4	11	18	25	...	...

June.

S.	...	2	9	16	23	30
M.	...	3	10	17	24	...
Tu.	...	4	11	18	25	...
W.	...	5	12	19	26	.
Th.	...	6	13	20	27	...
F.	...	7	14	21	28	
S.	1	8	15	22	29	.

July.

S.	.	7	14	21	28	...
M.	1	8	15	22	29	
Tu.	2	9	16	23	30	..
W.	3	10	17	24	31	...
Th.	4	11	12	25	..	...
F.	5	12	19	26	..	...
S.	6	13	20	27		...

August

S.	...	4	11	18	25	...
M.	...	5	12	19	26	...
Tu.	...	6	13	20	27	...
W.	...	7	14	21	28	...
Th.	1	8	15	22	29	...
F	2	9	16	23	30	...
S.	3	10	17	24	31	...

September.

S.	1	8	15	22	29	...
M.	2	9	16	23	30	...
Tu.	3	10	17	24	...	...
W.	4	11	18	25	...	...
Th.	5	12	19	26	...	...
F.	6	13	20	27	...	...
S.	7	14	21	28	...	...

October.

S	...	6	13	20	27	...
M.	...	7	14	21	28	...
Tu.	1	8	15	22	29	...
W.	2	9	16	23	30	...
Th.	3	10	17	24	31	...
F.	4	11	18	25	...	...
S.	5	12	19	26	...	...

November.

S.	...	3	10	17	24	...
M.	...	4	11	18	25	..
Tu.	...	5	12	19	26	...
W.	...	6	13	20	27	...
Th.	...	7	14	21	28	...
F.	1	8	15	22	29	...
S.	2	9	16	23	30	...

December.

S.	1	8	15	22	29	...
M.	2	9	16	23	30	...
Tu.	3	10	17	24	31	...
W.	4	11	18	25	...	...
Th.	5	12	19	26	.	...
F.	6	13	20	27	...	...
S.	7	14	21	28	..	...

Phases of the Moon—JANUARY 31 Days.

☾ Last Quarter .... 5th, 5h. 19·6m. P.M. | ☽ First Quarter ... 19th, 8h. 7·9m. P.M.

● New Moon ..... 13th, 4h. 5·8m. A.M. | ○ Full Moon..... 27th, 8h. 44·2m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.	Mean Time. Sunset. P.M.	Mean Time. True Noon.	Moon's Age at Noon.	Sun's Declination at Mean Noon.
			H. M.	H. M.	H. M. P.M.	D.	° S. ′
Tuesday ..	1	1	7 12	6 12	0 42	17·91	23 4
Wednesday ..	2	2	7 12	6 13	0 43	18·91	22 58
Thursday ..	3	3	7 13	6 13	0 43	19·91	22 54
Friday ..	4	4	7 13	6 14	0 44	20·91	22 48
Saturday ..	5	5	7 13	6 15	0 44	21·91	22 42
Sunday ..	6	6	7 13	6 15	0 44	22·91	22 35
Monday ..	7	7	7 14	6 16	0 45	23·91	22 28
Tuesday ..	8	8	7 14	6 17	0 45	24·91	22 21
Wednesday ..	9	9	7 14	6 17	0 46	25·91	22 13
Thursday ..	10	10	7 14	6 18	0 46	26·91	22 4
Friday ..	11	11	7 14	6 18	0 47	27·91	21 36
Saturday ..	12	12	7 15	6 19	0 47	28·91	21 46
Sunday ..	13	13	7 15	6 20	0 47	0·36	21 37
Monday ..	14	14	7 15	6 20	0 48	1·36	21 26
Tuesday ..	15	15	7 15	6 21	0 48	2·36	21 16
Wednesday ..	16	16	7 15	6 22	0 48	3·36	21 5
Thursday ..	17	17	7 15	6 22	0 49	4·36	20 54
Friday ..	18	18	7 15	6 23	0 49	5·36	20 42
Saturday ..	19	19	7 15	6 24	0 49	6·36	20 30
Sunday ..	20	20	7 15	6 24	0 50	7·36	20 17
Monday ..	21	21	7 15	6 25	0 50	8·36	20 4
Tuesday ..	22	22	7 15	6 25	0 50	9·36	19 51
Wednesday ..	23	23	7 15	6 26	0 51	10·36	19 37
Thursday ..	24	24	7 15	6 27	0 51	11·36	19 23
Friday ..	25	25	7 15	6 27	0 51	12·36	19 9
Saturday ..	26	26	7 15	6 28	0 51	13·36	18 54
Sunday ..	27	27	7 15	6 29	0 52	14·36	18 39
Monday ..	28	28	7 15	6 29	0 52	15·36	18 24
Tuesday ..	29	29	7 14	6 30	0 52	16·36	18 8
Wednesday ..	30	30	7 14	6 30	0 52	17·36	17 52
Thursday ..	31	31	7 14	6 31	0 52	18·36	17 35

Phases of the Moon—FEBRUARY 28 Days.

☾ Last Quarter..... 6th, 6h. 13·5m. A.M. | ☽ First Quarter .... 19th, 7h, 0·4m P.M.

● New Moon ..... 13th, 1h, 22·4m. A.M. | ○ Fool Moon ..... 27th, 9h. 2·8m. P.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.	Mean Time. Sunset. P.M.	Mean Time. True Noon.	Moon's Age at Noon.	Sun's Declination at Mean Noon.
			H. M.	H. M.	H. M. P.M.	D.	° S. ′
Friday ..	1	32	7 14	6 31	0 52	19·36	17 19
Saturday ..	2	33	7 13	6 32	0 53	20·36	17 2
Sunday ..	3	34	7 13	6 33	0 53	21·36	16 44
Monday ..		35	7 13	6 33	0 53	22·36	16 27
Tuesday ..	5	36	7 12	6 34	0 53	23·36	16 8
Wednesday ..	6	37	7 12	6 34	0 53	24·36	5 51
Thursday ..	7	38	7 12	6 35	0 53	25·36	15 32
Friday ..	8	39	7 11	6 35	0 53	26·36	15 14
Saturday ..	9	40	7 11	6 36	0 53	27·36	15 55
Sunday ..	10	41	7 10	6 36	0 53	28·36	14 35
Monday ..	11	42	7 10	6 37	0 53	29·36	14 16
Tuesday ..	12	43	7 9	6 37	0 53	0·98	13 56
Wednesday ..	13	44	7 9	6 37	0 53	1·98	13 37
Thursday ..	14	45	7 9	6 38	0 53	2·98	13 16
Friday ..	15	46	7 8	6 39	0 53	3·98	12 56
Saturday ..	16	47	7 7	6 39	0 53	4·98	12 36
Sunday ..	17	48	7 7	6 40	0 53	5·98	12 15
Monday ..	18	49	7 6	6 40	0 53	6·98	11 54
Tuesday ..	19	50	7 6	6 40	0 53	7·98	11 33
Wednesday ..	20	51	7 5	6 41	0 53	8·98	11 11
Thursday ..	21	52	7 5	6 41	0 53	9·98	10 50
Friday ..	22	53	7 4	6 42	0 52	10·98	10 28
Saturday ..	23	54	7 3	6 42	0 52	11·98	10 6
Sunday ..	24	55	7 3	6 42	0 52	12·98	9 44
Monday ..	25	56	7 2	6 43	0 52	13·98	9 22
Tuesday ..	26	57	7 1	6 43	0 52	14·98	9 0
Wednesday ..	27	58	7 1	6 43	0 52	15·98	8 37
Thursday ..	28	59	7 0	6 44	0 52	16·98	8 15

Phases of the Moon—MARCH 31 Days.

☾ Last Quarter..... 6th, 6h. 13·6m. A.M.. | ☽ First Quarter .... 19th, 7h. 0·4m. P.M.

● New Moon ..... 13th, 1h. 22·4m. A.M. | ○ Full Moon ..... 27th, 9h. 2·8m. P.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.	Mean Time. Sunset. P.M.	Mean Time. True Noon.	Moon's Age at Noon.	Sun's Declination at Mean Noon.
			H. M.	H. M.	H. M. P. M.	D.	° S. ,
Friday ..	1	60	6 59	6 44	0 51	17·98	7 52
Saturday ..	2	61	6 58	6 45	0 51	18·98	7 29
Sunday ..	3	62	6 57	6 45	0 51	19·98	7 7
Monday ..	4	63	6 56	6 45	0 51	20·98	7 18
Tuesday ..	5	64	6 56	6 46	0 50	21·98	6 21
Wednesday ..	6	65	6 55	6 46	0 50	22·98	5 57
Thursday ..	7	66	6 54	6 46	0 50	23·98	5 34
Friday ..	8	67	6 53	6 47	0 50	24·98	5 11
Saturday ..	9	68	6 53	6 47	0 49	25·98	4 48
Sunday ..	10	69	6 52	6 47	0 49	26·98	4 24
Monday ..	11	70	6 51	6 48	0 49	27·98	4 1
Tuesday ..	12	71	6 49	6 48	0 49	28·98	3 37
Wednesday ..	13	72	6 49	6 48	0 48	0·47	3 13
Thursday ..	14	73	6 48	6 48	0 48	1·47	2 50
Friday ..	15	74	6 47	6 49	0 48	2·47	2 26
Saturday ..	16	75	6 46	6 49	0 47	3·47	2 3
Sunday ..	17	76	6 45	6 49	0 47	4·47	1 39
Monday ..	18	77	6 44	6 49	0 47	5·47	1 15
Tuesday ..	19	78	6 44	6 50	0 46	6·47	0 51
Wednesday ..	20	79	6 43	6 50	0 46	7·47	0 28 N
Thursday ..	21	80	6 42	6 50	0 45	8·47	0 6
Friday ..	22	81	6 41	6 50	0 45	9·47	0 20
Saturday ..	23	82	6 40	6 51	0 45	10·47	0 48
Sunday ..	24	83	6 39	6 51	0 44	11·47	1 7
Monday ..	25	84	6 39	6 51	0 44	12·47	1 31
Tuesday ..	26	85	6 38	6 51	0 44	13·47	1 54
Wednesday ..	27	86	6 37	6 51	0 44	14·47	2 18
Thursday ..	28	87	6 37	6 52	0 43	15·47	2 42
Friday ..	29	88	6 36	6 52	0 43	16·47	3 5
Saturday ..	30	89	6 35	6 52	0 43	17·47	3 28
Sunday ..	31	90	6 34	6 52	0 43	18·47	3 52

Phases of the Moon—APRIL 30 Days

(Last Quarter .... 4th, 7h. 3·1m. P.M. |) First Quarter.....18th, 9h. 37·7m. A.M.

● New Moon .....11th, 10h. 4·3m. A.M. | ○ Full Moon ..... 26th, 1h. 35·4m. P.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.		Sunset. P.M.		True Noon. P.M.		Moon's Age at Noon.	Sun's Declination at Mean Noon.
			H.	M.	H.	M.	H.	M.	D.	N. ° ′
Monday ..	1	91	6	33	6	53	0	43	19·47	4 15
Tuesday ..	2	92	6	33	6	53	0	43	20·47	4 38
Wednesday ..	3	93	6	32	6	53	0	42	21·47	5 1
Thursday ..	4	94	6	31	6	53	0	42	22·47	5 24
Friday ..	5	95	6	30	6	54	0	42	23·47	5 47
Saturday ..	6	96	6	29	6	54	0	41	24·47	6 10
Sunday ..	7	97	6	28	6	54	0	41	25·47	6 32
Monday ..	8	98	6	28	6	54	0	41	26·47	6 55
Tuesday ..	9	99	6	27	6	54	0	41	27·47	7 17
Wednesday ..	10	100	6	26	6	55	0	40	28·47	7 40
Thursday ..	11	101	6	25	6	55	0	40	0·11	8 2
Friday ..	12	102	6	24	6	55	0	40	1·11	8 24
Saturday ..	13	103	6	24	6	56	0	39	2·11	8 46
Sunday ..	14	104	6	23	6	56	0	39	3·11	9 8
Monday ..	15	105	6	22	6	56	0	39	4·11	9 29
Tuesday ..	16	106	6	21	6	56	0	39	5·11	9 51
Wednesday ..	17	107	6	21	6	57	0	38	6·11	10 12
Thursday ..	18	108	6	20	6	57	0	38	7·11	10 33
Friday ..	19	109	6	19	6	57	0	38	8·11	10 54
Saturday ..	20	110	6	19	6	57	0	38	9·11	11 15
Sunday ..	21	111	6	18	6	57	0	38	10·11	11 36
Monday ..	22	112	6	17	6	58	0	37	11·11	11 56
Tuesday ..	23	113	6	16	6	58	0	37	12·11	12 16
Wednesday ..	24	114	6	16	6	58	0	37	13·11	12 36
Thursday ..	25	115	6	15	6	59	0	37	14·11	12 56
Friday ..	26	116	6	14	6	59	0	37	15·11	13 16
Saturday ..	27	117	6	14	6	59	0	36	16·11	13 35
Sunday ..	28	118	6	13	7	0	0	36	17·11	13 54
Monday ..	29	119	6	12	7	0	0	36	18·11	14 13
Tuesday ..	30	120	6	12	7	0	0	36	19·11	14 32

Phases of the Moon—MAY 31 Days.

☾ Last Quarter ....4th, 3h. 36·2m. A.M. | ☽ First Quarter..... 18th, 1h. 44·3m. A.M.

● New Moon .....10th, 6h. 30·9m. P.M. | ○ Full Moon .....26th, 4h. 2·4m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.	Mean Time. Sunset. P.M.	Mean Time. True Noon.	Moon's Age at Noon.	Sun's Declination at Mean Noon.
			H. M.	H. M.	H. M. P.M.	D.	° N. ′
Wednesday ..	1	121	6 11	7 1	0 36	20·11	14 51
Thursday ..	2	122	6 11	7 1	0 36	21·11	15 9
Friday ..	3	123	6 10	7 1	0 36	22·11	15 27
Saturday ..	4	124	6 10	7 2	0 35	23·11	15 44
Sunday ..	5	125	6 9	7 2	0 35	24·11	16 2
Monday ..	6	126	6 9	7 2	0 35	25·11	16 19
Tuesday ..	7	127	6 8	7 2	0 35	26·11	16 36
Wednesday ..	8	128	6 8	7 3	0 35	27·11	16 53
Thursday ..	9	129	6 7	7 3	0 35	28·11	17 9
Friday ..	10	130	6 7	7 3	0 35	29·11	17 25
Saturday ..	11	131	6 6	7 4	0 35	0·76	17 41
Sunday ..	12	132	6 6	7 4	0 35	1·76	17 56
Monday ..	13	133	6 5	7 4	0 35	2·76	18 12
Tuesday ..	14	134	6 5	7 5	0 35	3·76	18 26
Wednesday ..	15	135	6 5	7 5	0 35	4·76	18 41
Thursday ..	16	136	6 4	7 6	0 35	5·76	18 55
Friday ..	17	137	6 4	7 6	0 35	6·76	19 9
Saturday ..	18	138	6 4	7 6	0 35	7·76	19 23
Sunday ..	19	139	6 3	7 7	0 35	8·76	19 36
Monday ..	20	140	6 3	7 7	0 35	9·76	19 49
Tuesday ..	21	141	6 3	7 7	0 35	10·76	20 2
Wednesday ..	22	142	6 2	7 8	0 35	11·76	20 14
Thursday ..	23	143	6 2	7 8	0 35	12·76	20 26
Friday ..	24	144	6 2	7 9	0 35	13·76	20 38
Saturday ..	25	145	6 2	7 9	0 35	14·76	20 49
Sunday ..	26	146	6 2	7 9	0 35	15·76	21 0
Monday ..	27	147	6 2	7 10	0 36	16·76	21 9
Tuesday ..	28	148	6 1	7 10	0 36	17·76	21 20
Wednesday ..	29	149	6 1	7 11	0 36	18·76	21 30
Thursday ..	30	150	6 1	7 11	0 36	19·76	21 39
Friday ..	31	151	6 1	7 11	0 36	20·76	21 49

Phases of the Moon—JUNE 30 Days.

☾ Last Quarter ....2nd, 9h. 50·0m. A.M. | ☽ First Quarter.....16th, 6h. 41·7m. P.M.

● New Moon .....9th, 3h. 32·7m. A.M. | ○ Full Moon .....24th, 4h. 8·3m. P.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.		Sunset. P.M.		True Noon.		Moon's Age at Noon.	Sun's Declination at Mean Noon.
			H.	M.	H.	M.	H. P.M.	M.	D.	N.
Saturday ..	1	152	6	1	7	12	0	36	21·76	21 57
Sunday ..	2	153	6	1	7	12	0	36	22·76	22 5
Monday ..	3	154	6	1	7	13	0	37	23·76	22 13
Tuesday ..	4	15	6	1	7	13	0	37	24·76	22 21
Wednesday ..	5	156	6	1	7	14	0	37	25·76	22 28
Thursday ..	6	157	6	1	7	14	0	37	26·76	22 35
Friday ..	7	158	6	1	7	14	0	37	27·76	22 41
Saturday ..	8	159	6	1	7	15	0	37	28·76	22 47
Sunday ..	9	160	6	1	7	15	0	38	0·38	22 52
Monday ..	10	161	6	1	7	15	0	38	1·38	22 58
Tuesday ..	11	162	6	1	7	16	0	38	2·38	23 2
Wednesday ..	12	163	6	1	7	16	0	38	3·38	23 [illegible]
Thursday ..	13	164	6	1	7	16	0	38	4·38	23 10
Friday ..	14	165	6	1	7	17	0	39	5·38	23 14
Saturday ..	15	166	6	1	7	17	0	39	6·38	23 17
Sunday ..	16	167	6	1	7	17	0	39	7·38	23 20
Monday ..	17	168	6	1	7	17	0	39	8·38	23 23
Tuesday ..	18	169	6	2	7	18	0	39	9·38	23 24
Wednesday ..	19	170	6	2	7	18	0	40	10·38	23 25
Thursday ..	20	171	6	2	7	18	0	40	11·38	23 26
Friday ..	21	172	6	2	7	18	0	40	12·38	23 27
Saturday ..	22	173	6	3	7	19	0	40	13·38	23 27
Sunday ..	23	174	6	3	7	19	0	41	14·38	23 27
Monday ..	24	175	6	3	7	19	0	41	15·38	23 26
Tuesday ..	25	176	6	3	7	19	0	41	16·38	23 25
Wednesday ..	26	177	6	3	7	19	0	41	17·38	23 24
Thursday ..	27	178	6	4	7	19	0	41	18·38	23 22
Friday ..	28	179	6	4	7	20	0	42	19·38	23 20
Saturday ..	29	180	6	4	7	20	0	42	20·38	23 17
Sunday ..	30	181	6	5	7	20	0	42	21·38	23 14

Phases of the Moon—JULY 31 Days.

☾ Last Quarter.....1st, 2h. 12·9m. P.M. | ☽ First Quarter .....16th, 11h. 54·7m. A.M.
● New Moon .....8th, 1h. 52·1m. P.M. | ○ Full Moon .....24th, 2h. 4·8m. A.M.
☾ Last Quarter .....30th, 6h. 43·9m. P.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.		Sunset. P.M.		True Noon.		Moon's Age at Noon.	Sun's Declination at Mean Noon.
			H.	M.	H.	M.	H. P.M.	M.	D.	° N. ′
Monday ..	1	182	6	5	7	20	0	42	22·38	23 10
Tuesday ..	2	183	6	5	7	20	0	42	23·38	23 6
Wednesday ..	3	184	6	6	7	20	0	43	24·38	23 2
Thursday ..	4	185	6	6	7	20	0	43	25·38	22 57
Friday ..	5	186	6	6	7	20	0	43	26·38	22 52
Saturday ..	6	187	6	7	7	20	0	43	27·38	22 47
Sunday ..	7	188	6	7	7	20	0	43	28·38	22 40
Monday ..	8	189	6	7	7	20	0	43	29·38	22 34
Tuesday ..	9	190	6	8	7	20	0	44	0·95	22 28
Wednesday ..	10	191	6	8	7	20	0	44	1·95	22 21
Thursday ..	11	192	6	8	7	20	0	44	2·95	22 13
Friday ..	12	193	6	9	7	20	0	44	3·95	22 6
Saturday ..	13	194	6	9	7	20	0	44	4·95	21 57
Sunday ..	14	195	6	9	7	20	0	44	5·95	21 49
Monday ..	15	196	6	9	7	20	0	44	6·95	21 40
Tuesday ..	16	197	6	10	7	19	0	44	7·95	21 30
Wednesday ..	17	198	6	10	7	19	0	45	8·95	21 21
Thursday ..	18	199	6	10	7	19	0	45	9·95	21 11
Friday ..	19	200	6	11	7	19	0	45	10·95	21 0
Saturday ..	20	201	6	11	7	19	0	45	11·95	20 49
Sunday ..	21	202	6	12	7	19	0	45	12·95	20 38
Monday ..	22	203	6	12	7	18	0	45	13·95	20 28
Tuesday ..	23	204	6	12	7	18	0	45	14·95	20 15
Wednesday ..	24	205	6	13	7	18	0	45	15·95	20 3
Thursday ..	25	206	6	13	7	17	0	45	16·95	20 50
Friday ..	26	207	6	14	7	17	0	45	17·95	19 38
Saturday ..	27	208	6	14	7	17	0	45	18·95	19 24
Sunday ..	28	209	6	14	7	16	0	45	19·95	19 10
Monday ..	29	210	6	15	7	16	0	45	20·95	18 57
Tuesday ..	30	211	6	15	7	15	0	45	21·95	18 43
Wednesday ..	31	212	6	15	7	15	0	45	22·95	18 29

Phases of the Moon—AUGUST 31 Days.

● New Moon ..... 7th, 1h. 59·6m. A.M. | ○ Full Moon .....22nd, 10h. 32·3m. A.M.

☽ First Quarter.....15th, 4h. 46·4m. A.M. | ☾ Last Quarter ....29th, 0h. 57·1m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.	Mean Time. Sunset. P.M.	Mean Time. True Noon.	Moon's Age at Noon.	Sun's Declination at Mean Noon.
			H. M.	H. M.	H. M. P.M.	D.	° N. ′
Thursday ..	1	213	6 16	7 14	0 45	23·95	18 14
Friday ..	2	214	6 16	7 14	0 45	24·95	17 59
Saturday ..	3	215	6 16	7 14	0 45	25·95	17 43
Sunday ..	4	216	6 17	7 13	0 45	26·95	17 28
Monday ..	5	217	6 17	7 13	0 45	27·95	17 12
Tuesday ..	6	218	6 17	7 13	0 45	28·95	16 56
Wednesday ..	7	219	6 18	7 12	0 45	0·45	16 39
Thursday ..	8	220	6 18	7 11	0 45	1·45	16 23
Friday ..	9	221	6 18	7 11	0 45	2·45	16 6
Saturday ..	10	222	6 18	7 11	0 45	3·45	15 49
Sunday ..	11	223	6 19	7 10	0 45	4·45	15 31
Monday ..	12	224	6 19	7 9	0 45	5·45	15 13
Tuesday ..	13	225	6 19	7 9	0 45	6·45	14 55
Wednesday ..	14	226	6 20	7 8	0 44	7·45	14 37
Thursday ..	15	227	6 20	7 7	0 43	8·45	14 19
Friday ..	16	228	6 20	7 7	0 43	9·45	13 57
Saturday ..	17	229	6 20	7 6	0 43	10·45	13 41
Sunday ..	18	230	6 21	7 6	0 43	11·45	13 22
Monday ..	19	231	6 21	7 5	0 43	12·45	13 3
Tuesday ..	20	232	6 21	7 4	0 42	13·45	12 43
Wednesday ..	21	233	6 22	7 3	0 42	14·45	12 23
Thursday ..	22	234	6 22	7 3	0 42	15·45	12 3
Friday ..	23	235	6 22	7 2	0 42	16·45	11 43
Saturday ..	24	236	6 22	7 1	0 41	17·45	11 23
Sunday ..	25	237	6 22	7 0	0 41	18·45	11 3
Monday ..	26	238	6 23	6 59	0 41	19·45	10 42
Tuesday ..	27	239	6 23	6 58	0 41	20·45	10 21
Wednesday ..	28	240	6 23	6 57	0 40	21·45	10 0
Thursday ..	29	241	6 23	6 56	0 40	22·45	9 39
Friday ..	30	242	6 23	6 56	0 40	23·45	9 18
Saturday ..	31	243	6 24	6 55	0 39	24·45	8 56

Phases of the Moon—SEPTEMBER 30 Days.

● New Moon ..... 5th, 4h. 13·7m. P.M. | ○ Full Moon .....20th, 6h. 30·9m. P.M.

☽ First Quarter.....13th, 8h. 32·3m. P.M. | ☾ Last Quarter ....27th, 10h. 8·6m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.		Sunset. P.M.		True Noon.		Moon's Age at Noon.	Sun's Declination at Mean Noon.
			H.	M.	H.	M.	H. P.M.	M.	D.	° N. ′
Sunday ..	1	244	6	24	6	54	0	39	25·45	8 34
Monday ..	2	245	6	24	6	53	0	39	26·45	8 13
Tuesday ..	3	246	6	24	6	53	0	38	27·45	7 51
Wednesday ..	4	247	6	24	6	52	0	38	28·45	7 29
Thursday ..	5	248	6	25	6	51	0	38	29·45	7 7
Friday ..	6	249	6	25	6	50	0	37	0·85	6 45
Saturday ..	7	250	6	25	6	49	0	37	1·85	6 22
Sunday ..	8	251	6	25	6	48	0	37	2·85	6 0
Monday ..	9	252	6	25	6	47	0	36	3·85	5 37
Tuesday ..	10	253	6	26	6	47	0	36	4·85	5 15
Wednesday ..	11	254	6	26	6	46	0	36	5·85	4 52
Thursday ..	12	255	6	26	6	45	0	35	6·85	4 29
Friday ..	13	256	6	26	6	44	0	35	7·85	4 6
Saturday ..	14	257	6	26	6	43	0	34	8·85	3 43
Sunday ..	15	258	6	26	6	42	0	34	9·85	3 20
Monday ..	16	259	6	27	6	41	0	34	10·85	2 57
Tuesday ..	17	260	6	27	6	40	0	33	11·85	2 34
Wednesday ..	18	261	6	27	6	39	0	33	12·85	2 11
Thursday ..	19	262	6	27	6	39	0	33	13·85	1 47
Friday ..	20	263	6	27	6	38	0	32	14·85	1 24
Saturday ..	21	264	6	27	6	37	0	32	15·85	1 1
Sunday ..	22	265	6	28	6	36	0	32	16·85	0 37
Monday ..	23	266	6	28	6	35	0	31	17·85	0 14 S
Tuesday ..	24	267	6	28	6	34	0	31	18·85	0 9
Wednesday ..	25	268	6	28	6	33	0	31	19·85	0 33
Thursday ..	26	269	6	28	6	33	0	30	20·85	0 56
Friday ..	27	270	6	29	6	32	0	30	21·85	1 21
Saturday ..	28	271	6	29	6	31	0	30	22·85	1 43
Sunday ..	29	272	6	29	6	30	0	29	23·85	2 6
Monday ..	30	273	6	29	6	29	0	29	24·85	2 30

Phases of the Moon—OCTOBER 31 Days.

● New Moon.....5th, 8h. 35·2m. A.M. | ○ Full Moon.....20th, 3h. 4·8m. A.M.

☾ First Quarter.....13th, 10h. 30·0m. A.M. | ☽ Last Quarter ....26th, 11h. 5·4m. P.M.

Day of the Week.	Day of the Month.	Day of the Year	Mean Time. Sunrise. A.M.		Sunset. P.M.		True Noon.		Moon's Age at Noon.	Sun's Declination at Mean Noon.	
			H.	M.	H.	M.	H. P.M.	M.	D.	°	′
Tuesday ..	1	274	6	30	6	28	0	29	25·85	2	53
Wednesday ..	2	275	6	30	6	27	0	28	26·85	3	16
Thursday ..	3	276	6	30	6	26	0	28	27·85	3	40
Friday ..	4	277	6	30	6	26	0	28	28·85	4	3
Saturday ..	5	278	6	30	6	25	0	27	0·17	4	26
Sunday ..	6	279	6	31	6	24	0	27	1·17	4	40
Monday ..	7	280	6	31	6	23	0	27	2·17	5	12
Tuesday ..	8	281	6	31	6	22	0	26	3·17	5	35
Wednesday ..	9	282	6	31	6	21	0	26	4·17	5	58
Thursday ..	10	283	6	31	6	20	0	26	5·17	6	21
Friday ..	11	284	6	32	6	19	0	26	6·17	6	44
Saturday ..	12	285	6	32	6	18	0	25	7·17	7	6
Sunday ..	13	286	6	32	6	18	0	25	8·17	7	29
Monday ..	14	287	6	33	6	17	0	25	9·17	7	52
Tuesday ..	15	288	6	33	6	16	0	25	10·17	8	14
Wednesday ..	16	289	6	33	6	15	0	24	11.17	8	36
Thursday ..	17	290	6	33	6	15	0	24	12·17	8	58
Friday ..	18	291	6	34	6	14	0	24	13·17	9	20
Saturday ..	19	292	6	34	6	13	0	24	14·17	9	42
Sunday ..	20	293	6	34	6	13	0	24	15·17	10	4
Monday ..	21	294	6	35	6	12	0	24	16·17	10	26
Tuesday ..	22	295	6	35	6	11	0	23	17·17	10	47
Wednesday ..	23	296	6	35	6	11	0	23	18·17	11	7
Thursday ..	24	297	6	36	6	10	0	23	19·17	11	29
Friday ..	25	298	6	36	6	10	0	23	20·17	11	50
Saturday ..	26	299	6	37	6	9	0	23	21·17	12	11
Sunday ..	27	300	6	37	6	8	0	23	22·17	12	32
Monday ..	28	301	6	37	6	8	0	23	23·17	12	52
Tuesday ..	29	302	6	38	6	7	0	23	24·17	13	12
Wednesday ..	30	303	6	38	6	7	0	23	25·17	13	32
Thursday ..	31	304	6	39	6	7	0	22	26·17	13	50

Phases of the Moon—NOVEMBER 30 Days.

● New Moon ..... 4th, 2h. 31·6m. A.M. | ○ Full Moon ..... 19th, 1h. 3·0m. P.M.

☽ First Quarter ....11th, 10h. 16·2m. P.M. | ☾ Last Quarter.....25th, 3h. 55·3m. P.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.	Mean Time. Sunset. P.M.	Mean Time. True Noon.	Moon's Age at Noon.	Sun's Declination at Mean Noon.
			H. M.	H. M.	H. M. P.M.	D.	° ′ S.
Friday ..	1	305	6 39	6 6	0 22	27·17	14 11
Saturday ..	2	306	6 39	6 6	0 22	28·17	14 31
Sunday ..	3	307	6 40	6 5	0 22	29·17	14 50
Monday ..	4	308	6 40	6 5	0 22	0·42	15 18
Tuesday ..	5	309	6 41	6 4	0 22	1·42	15 27
Wednesday ..	6	310	6 41	6 4	0 22	2·42	15 45
Thursday ..	7	311	6 42	6 3	0 22	3·42	16 4
Friday ..	8	312	6 42	6 3	0 23	4·42	16 21
Saturday ..	9	313	6 43	6 3	0 23	5·42	16 38
Sunday ..	10	314	6 43	6 2	0 23	6·42	16 56
Monday ..	11	315	6 44	6 2	0 23	7·42	17 13
Tuesday ..	12	316	6 44	6 2	0 23	8·42	17 29
Wednesday ..	13	317	6 45	6 2	0 23	9·42	17 46
Thursday ..	14	318	6 45	6 1	0 23	10·42	18 2
Friday ..	15	319	6 46	6 1	0 23	11·42	18 17
Saturday ..	16	320	6 47	6 1	0 23	12·42	18 33
Sunday ..	17	321	6 47	6 1	0 24	13·42	18 48
Monday ..	18	322	6 48	6 0	0 24	14·42	19 3
Tuesday ..	19	323	6 48	6 0	0 24	15·42	19 17
Wednesday ..	20	324	6 49	6 0	0 24	16·42	19 31
Thursday ..	21	325	6 49	6 0	0 25	17·42	19 45
Friday ..	22	326	6 50	6 0	0 25	18·42	19 58
Saturday ..	23	327	6 50	6 0	0 25	19·42	20 11
Sunday ..	24	328	6 51	6 0	0 25	20·42	20 24
Monday ..	25	329	6 52	6 0	0 26	21·42	20 36
Tuesday ..	26	330	6 52	6 0	0 26	22·42	20 48
Wednesday ..	27	331	6 53	6 0	0 26	23·42	20 59
Thursday ..	28	332	6 54	6 0	0 27	24·42	21 10
Friday ..	29	333	6 54	6 0	0 27	25·42	21 21
Saturday ..	30	334	6 55	6 0	0 27	26·42	22 31

Phases of the Moon—DECEMBER 31 Days.

● New Moon .....3rd, 8h. 49·3m. P.M. | ○ Full Moon.....18th, 0h. 47·5m. A.M.

☽ First Quarter ....11th, 8h. 1·4m. A.M. | ☾ Last Quarter ....25th, 0h. 0·6m. P.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time. Sunrise. A.M.		Sunset. P.M.		True Noon.		Moon's Age at Noon.	Sun's Declination at Mean Noon.	
			H.	M.	H.	M.	H. P.	M.	D.	°	′ S.
Sunday ..	1	335	6	56	6	0	0	28	27·42	21	42
Monday ..	2	336	6	56	6	1	0	28	28·42	21	52
Tuesday ..	3	337	6	57	6	1	0	28	29·42	22	0
Wednesday ..	4	338	6	57	6	1	0	29	0·66	22	9
Thursday ..	5	339	6	58	6	1	0	29	1·66	22	17
Friday ..	6	340	6	59	6	1	0	30	2·66	22	25
Saturday ..	7	341	6	59	6	1	0	30	3·66	22	32
Sunday ..	8	342	7	0	6	2	0	30	4·66	22	39
Monday ..	9	343	7	1	6	2	0	31	5·66	22	45
Tuesday ..	10	344	7	1	6	2	0	31	6·66	22	51
Wednesday ..	11	345	7	2	6	3	0	32	7·66	22	57
Thursday ..	12	346	7	2	6	3	0	32	8·66	23	2
Friday ..	13	347	7	3	6	3	0	33	9·66	23	6
Saturday ..	14	348	7	3	6	4	0	33	10·66	23	11
Sunday ..	15	349	7	4	6	4	0	34	11·66	23	14
Monday ..	16	350	7	5	6	4	0	34	12·66	23	18
Tuesday ..	17	351	7	5	6	5	0	35	13·66	23	20
Wednesday ..	18	352	7	6	6	5	0	35	14·66	23	23
Thursday ..	19	353	7	6	6	6	0	36	15·66	23	24
Friday ..	20	354	7	7	6	6	0	36	16·66	23	26
Saturday ..	21	355	7	7	6	7	0	37	17·66	23	27
Sunday ..	22	356	7	8	6	7	0	37	18·66	23	27
Monday ..	23	357	7	8	6	8	0	38	19·66	23	27
Tuesday ..	24	358	7	9	6	8	0	38	20·66	23	26
Wednesday ..	25	359	7	9	6	9	0	39	21·66	23	25
Thursday ..	26	360	7	10	6	9	0	39	22·66	23	24
Friday ..	27	361	7	10	6	10	0	40	23·66	23	22
Saturday ..	28	362	7	11	6	10	0	40	24·66	23	19
Sunday ..	29	363	7	11	6	11	0	41	25·66	23	16
Monday ..	30	364	7	11	6	12	0	41	26·66	23	13
Tuesday ..	31	365	7	12	6	12	0	42	27·66	23	9

CALENDAR FOR 1919.

January.

S.	...	5	12	19	26	...
M.	...	6	13	20	27	...
Tu.	...	7	14	21	28	...
W.	1	8	15	22	29	...
Th.	2	9	16	23	30	...
F.	3	10	17	24	31	...
S.	4	11	18	25	...	...

February.

S.	...	2	9	16	23	...
M.	...	3	10	17	24	...
Tu.	...	4	11	18	25	...
W.	...	5	12	19	26	...
Th.	...	6	13	20	27	...
F.	...	7	14	21	28	...
S.	1	8	15	22	...	...

March.

S.	...	2	9	16	23	30
M.	...	3	10	17	24	31
Tu.	...	4	11	18	25	...
W.	...	5	12	19	26	...
Th.	...	6	13	20	27	...
F.	...	7	14	21	28	...
S.	1	8	15	22	29	...

April.

S.	...	6	13	20	27	...
M.	...	7	14	21	28	...
Tu.	1	8	15	22	29	...
W.	2	9	16	23	30	...
Th.	3	10	17	24	...	...
F.	4	11	18	25	...	...
S.	5	12	19	26	...	...

May.

S.	...	4	11	18	25	...
M.	...	5	12	19	26	...
Tu.	...	6	13	20	27	...
W.	...	7	14	21	28	...
Th.	1	8	15	22	29	...
F.	2	9	16	23	30	...
S.	3	10	17	24	31	...

June.

S.	1	8	15	22	29	...
M.	2	9	16	23	30	...
Tu.	3	10	17	24	...	...
W.	4	11	18	25	...	...
Th.	5	12	19	26	...	...
F.	6	13	20	27	...	...
S.	7	14	21	28	...	...

July.

S.	...	6	13	20	27	...
M.	...	7	14	21	28	...
Tu.	1	8	15	22	29	...
W.	2	9	16	23	30	...
Th.	3	10	17	24	31	...
F.	4	11	18	25	...	...
S.	5	12	19	26	...	...

August.

S.	...	3	10	17	24	31
M.	...	4	11	18	25	...
Tu.	...	5	12	19	26	...
W.	...	6	13	20	27	...
Th.	..	7	14	21	28	...
F.	1	8	15	22	29	...
S.	2	9	16	23	30	...

September.

S.	...	7	14	21	28	...
M.	1	8	15	22	29	...
Tu.	2	9	16	23	30	...
W.	3	10	17	24	...	...
Th.	4	11	18	25	...	...
F.	5	12	19	26	...	...
S.	6	13	20	27	...	

October.

S.	..	5	12	19	26	...
M.	...	6	13	20	27	...
Tu.	...	7	14	21	28	...
W.	1	8	15	22	29	...
Th.	2	9	16	23	30	...
F.	3	10	17	24	31	...
S.	4	11	18	25	...	...

November.

S.	..	2	9	16	23	30
M.	...	3	10	17	24	...
Tu.	...	4	11	18	25	...
W.	...	5	12	19	23	...
Th.	...	6	13	20	27	...
F.	...	7	14	21	28	...
S.	1	8	15	22	29	...

December.

S.	...	7	14	21	28	...
M.	1	8	15	22	29	...
Tu.	2	9	16	23	30	...
W.	3	10	17	24	31	...
Th.	4	11	18	25	...	...
F.	5	12	19	23	...	...
S.	6	13	20	27	...	...

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India in 1917.

There are few more difficult tasks than to see in correct perspective the progress of events in India in 1917.

The war has dominated everything. Towards the end of the year the collapse of Russia, threw on the Allies the immense burden of providing from their own resources, in conjunction with the United States, compensation for the withdrawal from the fight of the Russian millions. In this effort India took a splendid part. The report of the Commission appointed to inquire into the shortcomings of the first Expedition to Mesopotamia, which resulted in the Battle of Ctesiphon with most inadequate forces, and the heroic failure of the attempts to relieve the besieged garrison of Kut-al-Amara, revealed grave defects in the Indian military machine. But by the time the report of the Commission was presented there had been a vast improvement in the organisation of the forces in Mesopotamia, and the preparations were complete which resulted in the capture of Baghdad and the infliction of a series of heavy defeats on the Turks. Whilst the War Office has assumed sole control of the operations, the contribution of India to the result was most material. The appointment of a Central Recruiting Board stimulated the flow of an unprecedented number of recruits to the combatant forces and to the various Labour Corps which were enrolled. The constitution of a Munitions Board mobilised the industrial and agricultural resources of the country for military purposes and through these agencies India became the main centre of supply for the armies of Mesopotamia, Egypt and East Africa.

Financially India has also borne her share of the Imperial burden. During the year the Imperial Legislative Council unanimously accepted one hundred million sterling of the Imperial War Debt, and provided the taxation necessary to discharge the interest and sinking fund charges, amounting to six millions a year. By a special effort an Indian War Loan was raised which provided approximately forty millions sterling of cash for the Government to draw upon. In comparison with the cost of the war the figures seem small. But the Indian Empire is a poor country, faced by an immense expenditure on education, sanitation and economic development. The contribution, with the charges which it involved, was a contribution from necessities, not from luxuries; the subscriptions to the War Loan aggregated nearly ten times the sum borrowed in a single year in time of peace.

Side by side with these immense activities, there were political developments which gave ground for great anxiety. When the war broke out there was a political truce, observed by both sides. As the war progressed some elements chafed against this truce, and in Madras in particular Mrs. Annie Besant, the head of the Theosophical Society, entered on a campaign of active criticism of Government, which in the opinion of those best qualified to judge brought Government into contempt and tended to make all government impossible. After the Governor of Madras, Lord Pentland, had made a speech in which he said the early realisation of self-government in India was impossible, the Madras Government decided to restrict the liberties of Mrs. Besant and of her two most active supporters and to confine their residence to the pleasant hill station of Ootacamund. This step was greeted with vehement protests from almost all parts of India, and the holding of public meetings to demand the release of Mrs. Besant. The excitements thus caused were allayed later in the year by the official announcement that the goal of the Imperial Government in India was the attainment of full self-government within the Empire and that whilst Parliament would be the judge of the time and place of the steps to this end, substantial steps would be taken without undue delay. Mrs. Besant was released from the mild detention imposed on her with her coadjutors. Later Mr. Edwin Montagu, the Secretary of State for India, arrived in the country at the head of a small mission, to consult with the Government of India and all representative organisations and individuals as to the measures first to be adopted. The Viceroy and Mr. Montagu visited the chief centres in India and received an immense number of deputations, also according interviews to all shades of opinion.

Any attempt to diagnose the forces behind these activities must necessarily be considered biassed by one side or the other. The view put forward here is that whilst the agitation was in part factious, in great measure it sprang from a feeling of anxiety lest after the war the natural growth of the political institutions in India towards self-government might be checked by reactionary, or ultra-conservative instincts. Whilst on the one side the Home Rule League has displayed great activity, and Mrs. Besant was elected President of the Indian National Congress, on the other the naturally conservative forces, the great English community, with their large commercial interests, the non-Brahman community, forming an immense majority of the Hindu population, and the Moslem community, with their separate interests have shown alarm lest they should be subjected not to impartial British Government, but to the domination of a Brahminical oligarchy based on a very narrow and untrained electorate.

None can forecast the growth of these forces. But the view expressed here is that frank recognition must be made of the fact that the natural destiny of every unit of the British Empire is self-government within the Empire, and that India can be no exception to that rule; that the time is ripe for the rapid extension of that principle in provincial affairs, with the increasing responsibility of Indians for the administration of their own land; and for the liberalisation of the Government of India and its freedom from the meticulous control of the Secretary of State. Any steps in this direction are of necessity leaps in the dark; but if they are wisely taken, with full recognition of the immense diversity of the population and the necessity of rapidly educating and expanding the electorate, these measures can be taken with reasoned confidence in the increasing strength and prosperity of India as an integral part of the Empire.

The History of India in Outline.

No history of India can be proportionate, and the briefest summary must suffer from the same defect. Even a wholesale acceptance as history of mythology, tradition, and folklore will not make good, though it makes picturesque, the many gaps that exist in the early history of India: and, though the labours of modern geographers and archæologists have been amazingly fruitful, it cannot be expected that these gaps will ever be filled to any appreciable extent. Approximate accuracy in chronology and an outline of dynastic facts are all that the student can look for up to the time of Alexander, though the briefest excursion into the by-ways of history will reveal to him many alluring and mysterious fields for speculation. There are, for example, to this day castes that believe they sprang originally from the loins of a being who landed "from an impossible boat on the shores of a highly improbable sea"; and the great epic poems contain plentiful statements equally difficult of reconciliation with modern notions of history as a science. But from the Jataka stories and the Puranas, much valuable information is to be obtained, and, for the benefit of those unable to go to these and other original sources, it has been distilled by a number of writers.

The orthodox Hindu begins the political history of India more than 3000 years before Christ, with the war waged on the banks of the Jumna between the sons of Kuru and the sons of Pandu; but the modern critic prefers to omit several of those remote centuries and to take 600 B. C., or thereabouts, as his starting point. At that time much of the country was covered with forest, but the Aryan races, who had entered India from the north, had established in parts a form of civilization far superior to that of the aboriginal savages, and to this day there survive cities, like Benares, founded by those invaders. In like manner the Dravidian invaders from an unknown land, who overran the Deccan and the Southern part of the Peninsula, crushed the aborigines, and, at a much later period, were themselves subdued by the Aryans. Of these two civilizing forces, the Aryan is the better known, and of the Aryan kingdoms the first of which there is authentic record is that of Magadha, or Bihar, on the Ganges. It was in, or near, this powerful kingdom that Jainism and Buddhism had their origin, and the fifth King of Magadha, Bimbisara by name, was the friend and patron of Gautama Buddha. The King mentioned was a contemporary of Darius, autocrat of Persia (521 to 485 B. C.) who annexed the Indus valley and formed from his conquest an Indian satrapy which paid as tribute the equivalent of about one million sterling. Detailed history, however, does not become possible until the invasion of Alexander in 326 B.C.

Alexander the Great.

That great soldier had crossed the Hindu Kush in the previous year and had captured Aornos, on the Upper Indus. In the spring of 326 he crossed the river at Ohind, received the submission of the King of Taxila, and marched against Porus who ruled the fertile country between the rivers Hydaspes (Jhelum) and Akesines (Chenab). The Macedonian carried all before him, defeating Porus at the battle of the Hydaspes, and crossing the Chenab and Ravi. But at the River Hyphasis (Bias) his weary troops mutinied, and Alexander was forced to turn back and retire to the Jhelum where a fleet to sail down the rivers to the sea was nearly ready. The wonderful story of Alexander's march through Mekran and Persia to Babylon, and of the voyage of Nearchus up the Persian Gulf is the climax to the narrative of the invasion but is not part of the history of India. Alexander had stayed nineteen months in India and left behind him officers to carry on the Government of the kingdoms he had conquered: but his death at Babylon, in 323, destroyed the fruits of what has to be regarded as nothing but a brilliant raid, and within two years his successors were obliged to leave the Indian provinces, heavily scarred by war but not hellenized.

The leader of the revolt against Alexander's generals was a young Hindu, Chandragupta who was an illegitimate member of the Royal Family of Magadha. He dethroned the ruler of that kingdom, and became so powerful that he is said to have been able to place 600,000 troops in the field against Seleucus, to whom Babylon had passed on the death of Alexander. This was too formidable an opposition to be faced, and a treaty of peace was concluded between the Syrian and Indian monarchs which left the latter the first paramount Sovereign of India (321 B. C.) with his capital at Pataliputra, the modern Patna and Bankipore. Of Chandragupta's court and administration a very full account is preserved in the fragments that remain of the history compiled by Megasthenes, the ambassador sent to India by Seleucus. His memorable reign ended in 297 B. C. when he was succeeded by his son Bindusara, who in his turn was succeeded by Asoka (269—231 B. C.) who recorded the events of his reign in numerous inscriptions. This king, in an unusually bloody war, added to his dominions the kingdom of Kalinga (the Northern Circars) and then becoming a convert to Buddhism, resolved for the future to abstain from conquest by force of arms. The consequences of the conversion of Asoka were amazing. He was not intolerant of other religions, and did not endeavour to force his creed on his "children". But he initiated measures for the propagation of his doctrine with the result that "Buddhism, which had hitherto been a merely local sect in the valley of the Ganges, was transformed into one of the greatest religions of the world—the greatest, probably, if measured by the number of adherents. This is Asoka's claim to be remembered; this it is which makes his reign an epoch, not only in the history of India, but in that of the world." The wording of his edicts reveal him as a great king as well as a great missionary, and it is to be hoped that the excavations now being carried on in the ruins of his palace may throw yet more light on his character and times. On his death the Maurya kingdom fell to pieces. Even during his reign there had been signs of new forces at work on the borderland of India, where the inde-

pendent kingdoms of Bactria and Parthia had been formed, and subsequent to it there were frequent Greek raids into India. The Greeks in Bactria, however, could not withstand the overwhelming force of the westward migration of the Yueh-chi horde, which, in the first century A. D., also ousted the Indo-Parthian kings from Afghanistan and North-Western India.

The first of these Yueh-chi kings to annex a part of India was Kadphises II (A. D. 85—125), who had been defeated in a war with China, but crossed the Indus and consolidated his power eastward as far as Benares. His son Kanishka (whose date is much disputed) left a name which to Buddhists stands second only to that of Asoka. He greatly extended the boundaries of his empire in the North, and made Peshawar his capital. Under him the power of the Kushan clan of the Yueh-chi reached its zenith and did not begin to decay until the end of the second century, concurrently with the rise in middle India of the Andhra dynasty which constructed the Amaravati stupa, "one of the most elaborate and precious monuments of piety ever raised by man."

The Gupta Dynasty.

Early in the fourth century there arose, at Pataliputra, the Gupta dynasty which proved of great importance. Its founder was a local chief, his son Samudragupta, who ruled for some fifty years from A.D. 326, was a king of the greatest distinction. His aim of subduing all India was not indeed fulfilled but he was able to exact tribute from the kingdoms of the South and even from Ceylon, and, in addition to being a warrior, he was a patron of the arts and of Sanskrit literature. The rule of his son, Chandragupta, was equally distinguished and is commemorated in an inscription on the famous iron pillar near Delhi, as well as in the writings of the Chinese pilgrim Fa-hien who pays a great tribute to the equitable administration of the country. It was not until the middle of the fifth century that the fortunes of the Gupta dynasty began to wane—in face of the onset of the White Huns from Central Asia—and by 480 the dynasty had disappeared. The following century all over India was one of great confusion, apparently marked only by the rise and fall of petty kingdoms, until a monarch arose, in A.D. 606, capable of consolidating an Empire. This was the Emperor Harsha who, from Thanasar near Ambala, conquered Northern India and extended his territory South to the Nerbudda. Imitating Asoka in many ways, this Emperor yet "felt no embarrassment in paying adoration in turn to Siva, the Sun, and Buddha at a great public ceremonial." Of his times a graphic picture has been handed down in the work of a Chinese "Master of the Law," Hiuen Tsiang by name. Harsha was the last native paramount sovereign of Northern India; on his death in 648 his throne was usurped by a Minister, whose treacherous conduct towards an embassy from China was quickly avenged, and the kingdom so laboriously established lapsed into a state of internecine strife which lasted for a century and a half.

The Andhras and Rajputs.

In the meantime in Southern India the Andhras had attained to great prosperity and carried on a considerable trade with Greece, Egypt and Rome, as well as with the East. Their domination ended in the fifth century A.D. and a number of new dynasties, of which the Pallavas were the most important, began to appear. The Pallavas made way in turn for the Chalukyas, who for two centuries remained the most important Deccan dynasty, one branch uniting with the Cholas. But the fortunes of the Southern dynasties are so involved, and in many cases so little known, that to recount them briefly is impossible. Few names of note stand out from the record, except those of Vikramaditya (11th century) and a few of the later Hindu rulers who made a stand against the growing power of Islam, of the rise of which an account is given below. In fact the history of mediæval India is singularly devoid of unity. Northern India was in a state of chaos from about 650 to 950 A.D. not unlike that which prevailed in Europe of that time, and materials for the history of these centuries are very scanty. In the absence of any powerful rulers the jungle began to gain back what had been wrested from it: ancient capitals fell into ruins from which in some cases they have not even yet been disturbed, and the aborigines and various foreign tribes began to assert themselves so successfully that the Aryan element was chiefly confined to the Doab and the Eastern Punjab. It is not therefore so much for the political as for the religious and social history of this anarchical period that one must look. And the greatest event—if a slow process may be called an event—of the middle ages was the transition from tribe to caste, the final disappearance of the old four-fold division of Brahmans, Kshattriyas, Vaisyas, and Sudras, and the formation of the new division of pure and impure largely resting upon a classification of occupations. But this social change was only a part of the development of the Hindu religion into a form which would include in its embrace the many barbarians and foreigners in the country who were outside it. The great political event of the period was the rise of the Rajputs as warriors in the place of the Kshattriyas. Their origin is obscure but they appeared in the 8th century and spread, from their two original homes in Rajputana and Oudh, into the Punjab, Kashmir, and the Central Himalayas, assimilating a number of fighting clans and binding them together with a common code. At this time Kashmir was a small kingdom which exercised an influence on India wholly disproportionate to its size. The only other kingdom of importance was that of Kanauj—in the Doab and Southern Oudh—which still retained some of the power to which it had reached in the days of Harsha, and of which the renown extended to China and Arabia.

With the end of the period of anarchy, the political history of India centres round the Rajputs. One clan founded the kingdom of Gujarat, another held Malwa, another (the Chauhans) founded a kingdom of which Ajmer was the capital, and so on. Kanauj fell into the hands of the Rathors (circ 1040 A.D.) and the dynasty then founded by that branch of the Gaharwars of Benares became one of the most famous in India. Later in the same century the Chauhans were united, and by

1163 one of them could boast that he had conquered all the country from the Vindhyas to the Himalayas, including Delhi already a fortress a hundred years old. The son of this conqueror was Prithwi Raj, the champion of the Hindus against the Mahomedans. With his death in battle (1192) ends the golden age of the new civilization that had been evolved out of chaos; and of the greatness of that age there is a splendid memorial in the temples and forts of the Rajput states and in the two great philosophical systems of Sankaracharya (ninth century) and Ramanuja (twelfth century). The triumph of Hinduism had been achieved, it must be added, at the expense of Buddhism, which survived only in Magadha at the time of the Mahomedan conquest and speedily disappeared there before the new faith.

Mahomedan India.

The wave of Mahomedan invaders that eventually swept over the country first touched India, in Sind, less than a hundred years after the death of the Prophet in 632. But the first real contact was in the tenth century when a Turkish slave of a Persian ruler founded a kingdom at Ghazni, between Kabul and Kandahar. A descendant of his, Mahmud (967-1030) made repeated raids into the heart of India, capturing places so far apart as Multan, Kanauj, Gwalior, and Somnath in Kathiawar, but permanently occupying only a part of the Punjab. Enduring Mahomedan rule was not established until the end of the twelfth century, by which time, from the little territory of Ghor, there had arisen one Mahomed Ghori capable of carving out a kingdom stretching from Peshawar to the Bay of Bengal. Prithwi Raj, the Chauhan ruler of Delhi and Ajmer, made a brave stand against, and once defeated, one of the armies of this ruler, but was himself defeated in the following year. Mahomed Ghori was murdered at Lahore (1206) and his vast kingdom, which had been governed by satraps, was split up into what were practically independent sovereignties. Of these satraps, Qutb-ud-din, the slave ruler of Delhi and Lahore, was the most famous, and is remembered by the great mosque he built near the modern Delhi. Between his rule and that of the Mughals, which began in 1526, only a few of the many Kings who governed and fought and built beautiful buildings, stand out with distinction. One of these was Ala-ud-din (1296-1316), whose many expeditions to the south much weakened the Hindu Kings, and who proved himself to be a capable administrator. Another was Firoz Shah, of the house of Tughlaq, whose administration was in many respects admirable, but which ended, on his abdication, in confusion. In the reign of his successor, Mahmud (1398-1413), the kingdom of Delhi went to pieces and India was for seven months at the mercy of the Turkish conqueror Taimur. It was the end of the fifteenth century before the kingdom, under Sikandar Lodi, began to recover. His son, Ibrahim, still further extended the kingdom that had been recreated, but was defeated by Babar, King of Kabul, at Panipat, near Delhi, in 1526, and there was then established in India the Mughal dynasty.

The Mahomedan dynasties that had ruled in capitals other than Delhi up to this date were of comparative unimportance, though some great men appeared among them. In Gujarat, for example, Ahmad Shah, the founder of Ahmedabad, showed himself a good ruler and builder as well as a good soldier, though his grandson, Mahmud Shah Begara, was a greater ruler—acquiring fame at sea as well as on land. In the South various kings of the Bahmani dynasty made names for themselves, especially in the long wars they waged on the new Hindu kingdom that had arisen which had its capital at Vijayanagar. Of importance also was Adil Khan, a Turk, who founded (1490) the Bijapur dynasty of Adil Shahis. It was one of his successors who crushed the Vijayanagar dynasty, and built the great mosque for which Bijapur is famous.

The Mughal Empire.

As one draws near to modern times it becomes impossible to present anything like a coherent and consecutive account of the growth of India as a whole. Detached threads in the story have to be picked up one by one and followed to their ending, and although the sixteenth century saw the first European settlements in India, it will be convenient here to continue the narrative of Mahomedan India almost to the end of the Mughal Empire. How Babar gained Delhi has already been told. His son, Humayun, greatly extended his kingdom, but was eventually defeated (1540) and driven into exile by Sher Khan, an Afghan of great capabilities, whose short reign ended in 1545. The Sur dynasty thus founded by Sher Khan lasted another ten years when Humayun having snatched Kabul from one of his brothers, was strong enough to win back part of his old kingdom. When Humayun died (1556) his eldest son, Akbar, was only 13 years old and was confronted by many rivals. Nor was Akbar well served, but his career of conquest was almost uninterrupted and by 1594 the whole of India North of the Nerbudda had bowed to his authority, and he subsequently entered the Deccan and captured Ahmednagar. This great ruler, who was as remarkable for his religious tolerance as for his military prowess, died in 1605, leaving behind him a record that has been surpassed by few. His son, Jehangir, who married the Persian lady Nur Jahan, ruled until 1627, bequeathing to an admiring posterity some notable buildings—the tomb of his father at Sikandra, part of the palace at Agra, and the palace and fortress of Lahore. His son, Shahjahan, was for many years occupied with wars in the Deccan, but found time to make his court of incredible magnificence and to build the most famous and beautiful of all tombs, the Taj Mahal, as well as the fort, palace and Juma Masjid at Delhi. The quarrels of his sons led to the deposition of Shahjahan by one of them, Aurangzeb, in 1658. This Emperor's rule was one of constant intrigue and fighting in every direction, the most important of his wars being a twenty-five years' struggle against the Marathas of the Deccan who, under the leadership of Sivaji, became a very powerful faction in Indian politics. His bigoted attitude towards Hinduism made Aurangzeb all the more anxious to establish his Empire on a firm basis in the south, but he was unable to hold his many conquests, and on his death (1707) the

Empire, for which his three sons were fighting, could not be held together. Internal disorder and Maratha encroachments continued during the reigns of his successors, and in 1739 a fresh danger appeared in the person of Nadir Shah, the Persian conqueror, who carried all before him. On his withdrawal, leaving Mahomed Shah on the throne, the old intrigues recommenced and the Marathas began to make the most of the opportunity offered to them by puppet rulers at Delhi and by almost universal discord throughout what had been the Mughal Empire. There is little to add to the history of Mahomedan India. Emperors continued to reign in name at Delhi up to the middle of the 19th century, but their territory and power had long since disappeared, being swallowed up either by the Marathas or by the British.

European Settlements.

The voyage of Vasco da Gama to India in 1498 was what turned the thoughts of the Portuguese to the formation of a great Empire in the East That idea was soon realized, for, from 1500 onwards, constant expeditions were sent to India and the first two Viceroys in India—Almeida and Albuquerque—laid the foundations of a great Empire and of a great trade monopoly. Goa, taken in 1510, became the capital of Portuguese India and remains to this day in the hands of its captors, and the countless ruins of churches and forts on the shores of Western India, as also farther East at Malacca, testify to the zeal with which the Portuguese endeavoured to propagate their religion and to the care they took to defend their settlements. There were great soldiers and great missionaries among them—Albuquerque, da Cunha, da Castro in the former class, St. Francis Xavier in the latter. But the glory of Empire loses something of its lustre when it has to be paid for, and the constant drain of men and money from Portugal, necessitated by the attacks made on their possessions in India and Malaya, was found almost intolerable. The junction of Portugal with Spain, which lasted from 1580 to 1640, also tended to the downfall of the Eastern Empire and when Portugal became independent again, it was unequal to the task of competing in the East with the Dutch and English. The Dutch had little difficulty in wresting the greater part of their territory from the Portuguese, but the seventeenth century naval wars with England forced them to relax their hold upon the coast of India, and during the French wars between 1795 and 1811 England took all Holland's Eastern possessions, and the Dutch have left in India but few traces of their civilisation and of the once powerful East India Company of the Netherlands.

The first English attempts to reach India date from 1496 when Cabot tried to find the North-West passage, and these attempts were repeated all through the sixteenth century. The first Englishman to land in India is said to have been one Thomas Stephens (1579) who was followed by a number of merchant adventurers, but trade between the two countries really dates from 1600 when Elizabeth incorporated the East India Company which had been formed in London. Factories in India were founded only after Portuguese and Dutch opposition had been overcome, notably in the sea fight off Swally (Suvali) in 1612. The first factory, at Surat, was for many years the most important English foothold in the East. Its establishment was followed by others, including Fort St. George, Madras, (1640) and Hughli (1651). In the history of these early years of British enterprise in India the cession of Bombay (1661) as part of the dower of Catherine of Braganza stands out as a land-mark; it also illustrates the weakness of the Portuguese at that date, since in return the King of England undertook to protect the Portuguese in India against their foes—the Marathas and the Dutch. Cromwell, by his treaty of 1654, had already obtained from the Portuguese an acknowledgment of England's right to trade in the East; and that right was now threatened, not by the Portuguese, but by Sivaji and by the general disorder prevalent in India. Accordingly, in 1668, the Company turned its attention to acquiring territorial power, and announced its intention to establish such a policy of civil and military power, and create and secure such a large revenue.....as may be the foundation of a large, well-grounded, sure English dominion in India for all time to come. Not much came of this announcement for some time, and no stand could be made in Bengal against the depredations of Aurangzeb. The foundations of Calcutta (1690) could not be laid by Job Charnock until after a humiliating peace had been concluded with that Emperor, and, owing to the difficulties in which the Company found itself in England, there was little chance of any immediate change for the better. The union of the old East India Company with the new one which had been formed in rivalry to it took place in 1708, and for some years peaceful development followed; though Bombay was always exposed by sea to attacks from the pirates, who had many strongholds within easy reach of that port, and on land to attacks from the Marathas. The latter danger was felt also in Calcutta. Internal dangers were numerous and still more to be feared. More than one mutiny took place among the troops sent out from England, and rebellions like that led by Keigwin in Bombay threatened to stifle the infant settlements. The public health was bad and the rate of mortality was at times appalling. To cope with such conditions strong men were needed, and the Company was in this respect peculiarly fortunate; the long list of its servants, from Oxenden and Aungier to Hastings and Raffles, contains many names of men who proved themselves good rulers and far-sighted statesmen, the finest Empire-builders the world has known.

Attempts to compete with the English were made of course. But the schemes of the Emperor Charles VI to secure a share of the Indian trade were not much more successful than those made by Scotland, Denmark, Sweden, and Russia. By the French, who founded Pondicherry and Chandernagore towards the end of the 17th century, much more was achieved, as will be seen from the following outline of the development of British rule.

The French Wars.

When war broke out between England and France in 1744, the French had acquired a

strong position in Southern India, which had become independent of Delhi and was divided into three large States—Hyderabad, Tanjore, and Mysore—and a number of petty states under local chieftains. In the affairs of these States Dupleix, when Governor of Pondicherry, had intervened with success, and when Madras was captured by a French squadron, under La Bourdonnais (1746) Dupleix wished to hand it over to the Nawab of Arcot—a deputy of the Nizam's who ruled in the Carnatic. The French, however, kept Madras, repelling an attack by the disappointed Nawab as well as the British attempts to recapture it. The treaty of Aix-la-Chapelle restored Madras to the English. The fighting had shown the Indian powers the value of European troops, and this was again shown in the next French war (1750-54) when Clive achieved enduring fame by his capture and subsequent defence of Arcot. This war arose from Dupleix supporting candidates for the disputed successions at Arcot and Hyderabad while the English at Madras put forward their own nominees. One of Dupleix's officers, the Marquis de Bussy, persuaded the Nizam to take into his pay the army which had established his power, and in return the Northern Circars, between Orisa and Madras, was granted to the French. This territory, however, was captured by the English in the seven years' war (1756-63). Dupleix had by then been recalled to France. Lally, who had been sent to drive the English out of India, captured Fort St. David and invested Madras. But the victory which Colonel (Sir Eyre) Coote won at Wandiwash (1760) and the surrender of Pondicherry and Gingee put an end to the French ambitions of Empire in Southern India. Pondicherry passed more than once from the one nation to the other before settling down to its present existence as a French colony in miniature.

Battle of Plassey.

While the English were fighting the third French war in the South they became involved in grave difficulties in Bengal, where Siraj-ud-Daula had acceded to power. The headquarters of the English at Calcutta were threatened by that ruler who demanded they should surrender a refugee and should cease building fortifications. They refused and he marched against them with a large army. Some of the English took to their ships and made off down the river, the rest surrendered and were cast into the jail known as the "Black Hole." From this small and stifling room 23 persons, out of 146, came out alive the next day. Clive who was at Madras, immediately sailed for Calcutta with Admiral Watson's squadron, recaptured the town (1757), and, as war with the French had been proclaimed, proceeded to take Chandernagore. The Nawab Siraj-ud-Daula then took the side of the French, and Clive, putting forward Mir Jafar as candidate for the Nawab's throne, marched out with an army consisting of 900 Europeans, 2,000 sepoys and 8 pieces of artillery against the Nawab's host of over 50,000. The result was the historic battle of Plassey (June 23) in which Clive, after hesitating on the course to be pursued, routed the Nawab. Mir Jafar was put on the throne at Murshidabad, and the price of this honour was put at £ 2,340,000 in addition to the grant to the Company of the land round Calcutta now known as the District of the twenty-four Parganas. In the year after Plassey, Clive was appointed Governor of Bengal and in that capacity sent troops against the French in Madras and in person led a force against the Oudh army that was threatening Mir Jafar, in each case with success. From 1760 to 1765 Clive was in England. During his absence the Council at Calcutta deposed Mir Jafar and, for a price, put Mir Kasim in his place. This ruler moved his capital to Monghyr, organized an army, and began to intrigue with the Nawab Wazir of Oudh. He soon found, in a dispute over customs dues, an opportunity of quarrelling with the English and the first shots fired by his followers were the signal for a general rising in Bengal. About 200 Englishmen and a number of sepoys were massacred, but his trained regiments were defeated at Gheria and Oodeynullah, and Mir Kasim sought protection from the Nawab of Oudh. But in 1764, after quelling a sepoy mutiny in his own camp by blowing 24 ringleaders from the guns, Major (Sir Hector) Munro defeated the joint forces of Shah Alam, the Mughal Emperor, and the Nawab of Oudh in the battle of Buxar. In 1765 Clive (now Baron Clive of Plassey) returned as Governor. "Two landmarks stand out in his policy. First, he sought the substance, although not the name, of territorial power, under the fiction of a grant from the Mughal Emperor. Second, he desired to purify the Company's service, by prohibiting illicit gains, and by guaranteeing a reasonable pay from honest sources. In neither respect were his plans carried out by his immediate successors. But our efforts towards a sound administration date from this second Governorship of Clive, as our military supremacy dates from his victory at Plassey." Before Clive left India, in 1767, he had readjusted the divisions of Northern India and had set up a system of Government in Bengal by which the English received the revenues and maintained the army while the criminal jurisdiction was vested in the Nawab. The performance of his second task, the purification of the Company's service, was hotly opposed but carried out. He died in 1774 by his own hand, the House of Commons having in the previous year censured him, though admitting that he did render "great and meritorious services to his country."

Warren Hastings.

The dual system of government that Clive had set up proved a failure and Warren Hastings was appointed Governor, in 1772, to carry out the reforms settled by the Court of Directors which were to give them the entire care and administration of the revenues. Thus Hastings had to undertake the administrative organization of India, and, in spite of the factious attitude of Philip Francis, with whom he fought a duel and of other members of his Council, he reorganized the civil service, reformed the system of revenue collection, greatly improved the financial position of the Company, and created courts of justice and some semblance of a police force. From 1772 to 1774 he was Governor of Bengal, and from 1774 to 1775

he was the first Governor-General, nominated under an Act of Parliament passed in the previous year. His financial reforms, and the forced contributions he enacted from the rebellious Chet Singh and the Begam of Oudh, were interpreted in England as acts of oppression and formed, together with his action in the trial of Nuncomar for forgery, the basis of his seven years' trial before the House of Lords which ended in a verdict of not guilty on all the charges. But there is much more for which his administration is justly famous. The recovery of the Marathas from their defeat at Panipat was the cardinal factor that influenced his policy towards the native states. One frontier was closed against Maratha invasion by the loan of a British brigade to the Nawab Wazir of Oudh, for his war against the Rohillas, who were intriguing with the Marathas. In Western India he found himself committed to the two Maratha wars (1775-82) owing to the ambition of the Bombay Government to place its own nominee on the throne of the Peshwa at Poona, and the Bengal troops that he sent over made amends, by the conquest of Gujrat and the capture of Gwalior, for the disgrace of Wadgaon where the Marathas overpowered a Bombay army. In the South—where interference from Madras had already led (1769) to what is known as the first Mysore war, a disastrous campaign against Hyder Ali and the Nizam—he found the Madras Government again in conflict with those two potentates. The Nizam he won over by diplomacy, but against Hyder Ali he had to despatch a Bengal army under Sir Eyre Coote. Hyder Ali died in 1782 and two years later a treaty was made with his son Tipu. It was in these acts of intervention in distant provinces that Hastings showed to best advantage as a great and courageous man, cautious, but swift in action when required. He was succeeded, after an interregnum, by Lord Cornwallis (1786-93) who built on the foundations of civil administration laid by Hastings, by entrusting criminal jurisdiction to Europeans and establishing an Appellate Court of Criminal Judicature at Calcutta. In the Civil Service he separated the functions of the District Collector and Judge and organized the "writers" and "merchants" of the Company into an administrative Civil Service. This system was subsequently extended to Madras and Bombay. Lord Cornwallis is better known for his introduction, on orders from England, of the Permanent Settlement in Bengal. (See article on *Land Revenue*). A third Mysore war was waged during his tenure of office which ended in the submission of Tipu Sultan. Sir John Shore (Lord Teignmouth), an experienced Civil Servant, succeeded Lord Cornwallis, and, in 1798, was followed by Lord Wellesley, the friend of Pitt, whose projects were to change the map of India.

Lord Wellesley's Policy.

The French in general, and "the Corsican" in particular, were the enemy most to be dreaded for a few years before Lord Wellesley took up his duties in India, and he formed the scheme of definitively ending French schemes in Asia by placing himself at the head of a great Indian confederacy. He started by obtaining from the Nawab of Oudh the cession of large tracts of territory in lieu of payments overdue as subsidies for British troops, he then won over the Nizam to the British side, and, after exposing the intrigues of Tipu Sultan with the French, embarked on the fourth Mysore war which ended (1799) in the fall of Seringapatam and the gallant death of Tipu. Part of Mysore, the Carnatic, and Tanjore roughly constituting the Madras Presidency of to-day then passed to British rule. The five Maratha powers—the Peshwa of Poona, the Gaekwar of Baroda, Sindhia of Gwalior, Holkar of Indore and the Raja of Nagpur—had still to be brought into the British net. The Peshwa, after being defeated by Holkar, fled to British territory and signed the Treaty of Bassein which led to the third Maratha war (1802-04) as it was regarded by Sindhia and the Raja of Nagpur at a betrayal of Maratha independence. In this the most successful of British campaigns in India, Sir Arthur Wellesley (the Duke of Wellington) and General (Lord) Lake carries all before them, the one by his victories of Assaye and Argaum and the other at Aligad, and Laswari. Later operations, such as Colonel Monson's retreat through Central India were less fortunate. The great acquisitions of territory made under Lord Wellesley proved so expensive that the Court of Directors, becoming impatient, sent out Lord Cornwallis a second time to make peace at any price. He, however, died soon after his arrival in India, and Sir George Barlow carried on the government (1805-7) until the arrival of a stronger ruler, Lord Minto. He managed to keep the peace in India for six years, and to add to British dominions by the conquest of Java and Mauritius. His foreign policy was marked by another new departure, inasmuch as he opened relations with the Punjab, Persia, and Afghanistan, and concluded a treaty with Ranjit Singh, at Lahore, which made that Sikh ruler the loyal ally of the British for life.

The successor of Lord Minto was Lord Moira, who found himself obliged almost at once to declare war on the Gurkhas of Nepal, who had been encroaching on British territory. After initial reverses, the English, under General Ochterlony, were successful and the Treaty of Sagauli (1816) was drawn up which defines British relations with Nepal to the present day. For this success Lord Moira was made Marquis of Hastings. In the same year he made preparations for the last Maratha war (1817-18) which was made necessary by the lawless conduct of the *Pindaris, gangs of Pathan or Rohilla* origin, whose chief patrons were the rulers of Native States. The large number of 120,000 that he collected for this purpose destroyed the Pindaris, annexed the dominions of the rebellious Peshwa of Poona, protected the Rajput States, made Sindhia enter upon a new treaty, and compelled Holkar to give up part of his territory. Thus Lord Hastings established the British power more firmly than ever, and when he resigned, in 1823, all the Native States outside the Punjab had become parts of the political system and British interests were permanently secured from the Persian Gulf to Singapore. Lord Amherst followed Lord Hastings, and his five years' rule (1823-28) are memorable for the first Burmese war and the capture of Bharatpur The former opera-

tion was undertaken owing to the insolent demands and raids of the Burmese, and resulted in the Burmese ceding Assam, Aracan, and the coast of Martaban and their claims to the lower provinces. The capture of Bharatpur by Lord Combermere (1826) wiped out the repulse which General Lake had received there twenty years earlier. A disputed succession on this occasion led to the British intervention.

Social Reform.

A former Governor of Madras, Lord William Bentinck, was the next Governor-General. His epitaph by Macaulay, says: "He abolished cruel rites; he effaced humiliating distinctions; he gave liberty to the expression of public opinion; his constant study was to elevate the intellectual and moral character of the nations committed to his charge."

Some of his financial reforms, forced on him from England, and his widening of the gates by which educated Indians could enter the service of the Company, were most unpopular at the time, but were eclipsed by the acts he took for the abolition of *Suti*, or widow-burning, and the suppression—with the help of Captain Sleeman—of the professional hereditary assassins known as *Thays*. In 1832 he annexed Cachar, and, two years later, Coorg. The incompetence of the ruler of Mysore forced him to take that State also under British administration—where it remained until 1881. His rule was marked in other ways by the despatch of the first steamship that made the passage from Bombay to Suez; and by his settlement of the long educational controversy in favour of the advocates of instruction in English and the vernaculars. Lord William Bentinck left India (1835) with his programme of reforms unfinished. The new Charter Act of 1833 had brought to a close the commercial business of the Company and emphasized their position as rulers of an Indian Empire in trust for the Crown. By it the whole administration, as well the legislation of the country, was placed in the hands of the Governor-General in Council, and authority was given to create a Presidency of Agra. Before his retirement Bentinck assumed the statutory title of Governor-General of India (1834), thus marking the progress of consolidation since Warren Hastings in 1774 became the first Governor-General of Fort William. Sir Charles Metcalfe, being senior member of Council, succeeded Lord William Bentinck, and during his short tenure of office carried into execution his predecessor's measures for giving entire liberty to the press.

Afghan Wars.

With the appointment of Lord Auckland, as Governor-General (1836-42) there began a new era of war and conquest. Before leaving London he announced that he looked with exultation to the prospect of "promoting education and knowledge, and of extending the blessings of good Government and happiness to millions in India;" but his administration was almost exclusively comprised in a fatal expedition to Afghanistan, which dragged in its train the annexation of Sind, the Sikh wars, and the inclusion of Baluchistan in the protectorate of India. The first Afghan war was undertaken partly to counter the Russian advance in Central Asia and partly to place on the throne at Kabul the dethroned ruler Shah Shuja in place of Dost Mahomed. The latter object was easily attained (1839) and for two years Afghanistan remained in the military occupation of the British. In 1841 Sir Alexander Burnes was assassinated in Kabul and Sir William Macnaghten suffered the same fate in an interview with the son of Dost Mahomed. The British Commander in Kabul, Gen. Elphinstone, was old and feeble, and after two months' delay he led his army of 4,500 and 12,000 camp followers back towards India in the depth of winter. Between Kabul and Jallalabad the whole force perished, either at the hands of the Afghans or from cold, and Dr. Brydon was the only survivor who reached the latter city. Lord Ellenborough succeeded Lord Auckland and was persuaded to send an army of retribution to relieve Jallalabad. One force under Gen. Pollock relieved Jallalabad and marched on Kabul, while Gen. Nott, advancing from Kandahar, captured Ghazni and joined Pollock at Kabul (1842). The bazaar at Kabul was blown up, the prisoners rescued, and the army returned to India leaving Dost Mahomed to take undisputed possession of his throne. The drama ended with a bombastic proclamation from Lord Ellenborough and the parade through the Punjab of the (spurious) gates of Somnath taken from the tomb of Mahmud of Ghazni.

Sikh Wars.

Lord Ellenborough's other wars the conquest of Sind by Sir Charles Napier and the suppression of an outbreak in Gwalior—were followed by his recall, and the appointment of Sir Henry (1st L ord) Hardinge to be Governor-General. A soldier Governor-General was not unacceptable, for it was felt that a trial of strength was imminent between the British and the remaining Hindu power in India, the Sikhs. Ranjit Singh, the founder of the Sikh Kingdom, had died in 1839, loyal to the end to the treaty he had made with Metcalfe thirty years earlier. He left no son capable of ruling, and the *khalsa*, or central council of the Sikh army, was burning to measure its strength with the British sepoys. The intrigues of two men, Lal Singh and Fej Singh, to obtain the supreme power led to their crossing the Sutlej and invading British territory. Sir Hugh Gough, the Commander-in-Chief, and the Governor-General hurried to the frontier, and within three weeks four pitched battles were fought—at Mudki, Ferozeshah, Aliwal and Sobraon. The Sikhs were driven across the Sutlej and Lahore surrendered to the British, but the province was not annexed. By the terms of peace the infant Dhuleep Singh was recognized as Rajah; Major Henry Lawrence was appointed Resident, to assist the Sikh Council of Regency, at Lahore; the Jullundur Doab was added to British territory; the Sikh army was limited; and a British force was sent to garrison the Punjab on behalf of the child Rajah. Lord Hardinge returned to England (1848) and was succeeded by Lord Dalhousie, the greatest of Indian proconsuls.

Dalhousie had only been in India a few months when the second Sikh war broke out. In the attack on the Sikh position at Chillianwala the British lost 2,400 officers and men

besides four guns and the colours of three regiments: but before reinforcements could arrive from England, bringing Sir Charles Napier as Commander-in-Chief, Lord Gough had restored his reputation by the victory of Gujrat which absolutely destroyed the Sikh army. As a consequence the Punjab was annexed and became a British province (1849), its pacification being so well carried out, under the two Lawrences that on the outbreak of the Mutiny eight years later it remained not only quiet but loyal. In 1852 Lord Dalhousie had again to embark on war, this time in Burma, owing to the ill-treatment of British merchants in Rangoon. The lower valley of the Irawaddy was occupied from Rangoon to Prome and annexed, under the name of Pegu, to those provinces that had been acquired in the first Burmese war. British territories were enlarged in many other directions during Lord Dalhousie's tenure of office. His "doctrine of lapse" by which British rule was substituted for Indian in States where continued misrule on the failure of a dynasty made this change possible, came into practice in the cases of Satara, Jhansi, and Nagpur (which last-named State became the Central Provinces) where the rulers died without leaving male heirs. Oudh was annexed on account of its misrule. Dalhousie left many other marks on India. He reformed the administration from top to bottom, founded the Public Works Department, initiated the railways, telegraphs and postal system, and completed the great Ganges canal. He also detached the Government of Bengal from the charge of the Governor-General, and summoned representatives of the local Governments to the deliberations of the Government of India. Finally, in education he laid down the lines of a department of public instruction and initiated more practical measures than those devised by his predecessors. It was his misfortune that the mutiny, which so swiftly followed his resignation, was by many critics in England attributed to his passion for change.

The Sepoy Mutiny.

Dalhousie was succeeded by Lord Canning in 1856, and in the following year the sepoys of the Bengal army mutinied and all the valley of the Ganges from Delhi to Patna rose in rebellion. The causes of this convulsion are difficult to estimate, but are probably to be found in the unrest which followed the progress of English civilisation; in the spreading of false rumours that the whole of India was to be subdued; in the confidence the sepoy troops had acquired in themselves under British leadership; and in the ambition of the educated classes to take a greater share in the government of the country. Added to this, there was in the deposed King of Delhi, Bahadur Shah, a centre of growing disaffection. Finally there was the story—not devoid of truth—that the cartridges for the new Enfield rifle were greased with fat that rendered them unclean for both Hindus and Mahomedans. And when the mutiny did break out it found the Army without many of its best officers who were employed in civil work, and the British troops reduced, in spite of Lord Dalhousie's warnings, below the number he considered essential for safety. On May 10 the sepoys at Meerut rose in mutiny, cut down a few Europeans, and, unchecked by the large European garrison, went off to Delhi where next morning the Mahomedans rose. From that centre the mutiny spread through the North-Western Provinces and Oudh into Lower Bengal. Risings in the Punjab were put down by Sir John Lawrence and his subordinates, who armed the Sikhs, and with their help reduced the sepoys, and Lawrence was subsequently able to send a strong body of Sikhs to aid in the siege of Delhi. The native armies of Madras and Bombay remained for the most part true to their colours. In Central India, the contingents of some of the great chiefs joined the rebels, but Hyderabad was kept loyal by the influence of its minister, Sir Salar Jung.

The interest of the war centres round Delhi, Cawnpore and Lucknow, though in other places massacres and fighting occurred. The siege of Delhi began on June 8 when Sir Henry Barnard occupied the Ridge outside the town. Barnard died of cholera early in July, and Thomas Reed, who took his place, was obliged through illness to hand over the command to Archdale Wilson. In August Nicholson arrived with a reinforcement from the Punjab. In the meantime the rebel force in Delhi was constantly added to by the arrival of new bodies of mutineers; attacks were frequent and the losses heavy: cholera and sunstroke carried off many victims on the Ridge: and when the final assault was made in September the Delhi army could only parade 4,720 infantry, of whom 1,960 were Europeans. The arrival of siege guns made it possible to advance the batteries on September 8, and by the 13th a breach was made. On the following day three columns were led to the assault, a fourth being held in reserve. Over the ruins of the Kashmir Gate, blown in by Horne and Salkeld, Col. Campbell led his men and Nicholson formed up his troops within the walls. By nightfall the British, with a loss of nearly 1,200 killed and wounded, had only secured a foothold in the city. Six days' street fighting followed and Delhi was won; but the gallant Nicholson was killed at the head of a storming party. Bahadur Shah was taken prisoner, and his two sons were shot by Captain Hudson.

Massacre at Cawnpore.

At Cawnpore the sepoys mutinied on June 27 and found in Nana Sahib, the heir of the last Peshwa, a willing leader in spite of his former professions of loyalty. There a European force of 240 with six guns had to protect 870 non-combatants, and held out for 22 days, surrendering only on the guarantee of the Nana that they should have a safe conduct as far as Allahabad. They were embarking on the boats on the Ganges when fire was opened on them, the men being shot or hacked to pieces before the eyes of their wives and children and the women being mutilated and murdered in Cawnpore to which place they were taken back. Their bodies were thrown down a well just before Havelock, having defeated the Nana's forces, arrived to the relief. In Lucknow a small garrison held out in the Residency from July 2 to September 25 against tremendous odds and enduring the most fearful hardships. The relieving force, under Havelock and Outram, was itself invested, and the garrison was

not finally delivered until Sir Colin Campbell arrived in November. Fighting continued for 18 months in Oudh, which Sir Colin Campbell finally reduced, and in Central India, where Sir Hugh Rose waged a brilliant campaign against the disinherited Rani of Jhansi—who died at the head of her troops—and Tantia Topi.

Transfer to the Crown.

With the end of the mutiny there began a new era in India, strikingly marked at the outset by the Act for the Better Government of India (1858) which transferred the entire administration from the Company to the Crown. By that Act India was to be governed by, and in the name of, the Sovereign through a Secretary of State, assisted by a Council of fifteen members. At the same time the Governor-General received the title of Viceroy. The European troops of the Company, numbering about 24,000 officers and men were—greatly resenting the transfer—amalgamated with the Royal service, and the Indian Navy was abolished. On November 1, 1858, the Viceroy announced in Durbar at Allahabad that Queen Victoria had assumed the government of India, and proclaimed a policy of justice and religious toleration. A principle already enunciated in the Charter Act of 1833 was reinforced, and all, of every race or creed, were to be admitted as far as possible to those offices in the Queen's service for which they might be qualified. The aim of the Government was to be the benefit of all her subjects in India—"In their prosperity will be our strength, in their contentment our security, and in their gratitude our best reward." Peace was proclaimed in July 1859, and in the cold weather Lord Canning went on tour in the northern provinces, to receive the homage of loyal chiefs and to assure them that the "policy of lapse" was at an end. A number of other important reforms marked the closing years of Canning's Viceroyalty. The India Councils Act (1861) augmented the Governor-General's Council, and the Councils of Madras and Bombay by adding non-official members, European and Indian, for legislative purposes only. By another Act of the same year High Courts of Judicature were constituted. To deal with the increased debt of India, Mr. James Wilson was sent from England to be Financial Member of Council, and to him are due the customs system, income tax, license duty, and State paper currency. The cares of office had broken down the Viceroy's health. Lady Canning died in 1862 and this hastened his departure for England where he died in June of that year. His successor, Lord Elgin, lived only a few months after his arrival in India, and was succeeded by Sir John (afterwards Lord) Lawrence, the "saviour of the Punjab."

Sir John Lawrence.

The chief task that fell to Sir John Lawrence was that of reorganising the Indian military system, and of reconstructing the Indian army. The latter task was carried out on the principle that in the Bengal army the proportion of Europeans to Indians in the infantry and cavalry should be one to two, and in the Madras and Bombay armies one to three: the artillery was to be almost wholly European. The re-organisation was carried out in spite of financial difficulties and the saddling of Indian revenues with the cost of a war in Abyssinia with which India had no direct concern; but operations in Bhutan were all the drain made on the army in India while the re-organising process was being carried on. Two severe famines—in Orissa (1866) and Bundelkhand and Upper Hindustan (1868-9)—occurred, while Sir John Lawrence was Viceroy, and he laid down the principle for the first time in Indian history, that the officers of the Government would be held personally responsible for taking every possible means to avert death by starvation. He also created the Irrigation Department under Col. (Sir Richard) Strachey. Two commercial crises of the time have to be noted. One seriously threatened the tea industry in Bengal. The other was the consequence of the wild gambling in shares of every description that took place in Bombay during the years of prosperity for the Indian cotton industry caused by the American Civil War. The "Share Mania," however, did no permanent harm to the trade of Bombay, but was, on the other hand, largely responsible for the series of splendid buildings begun in that city during the Governorship of Sir Bartle Frere. Sir John Lawrence retired in 1869, having passed through every grade of the service, from an Assistant Magistracy to the Viceroyalty. Lord Mayo, who succeeded him, created an Agricultural Department and introduced the system of Provincial Finance, thus fostering the impulse to local self-government. He also laid the foundation for the reform of the salt duties, thereby enabling his successors to abolish the inter-provincial customs lines. Unhappily his vast schemes for the development of the country by extending communications of every kind were not carried out to the full by him, for he was murdered in the convict settlement of the Andaman Islands, in 1872. Lord Northbrook (Viceroy 1872-6) had to exercise his abilities chiefly in the province of finance. A severe famine which threatened Lower Bengal in 1874 was successfully warded off by the organization of State relief and the importation of rice from Burma. The following year was notable for the deposition of the Gaikwar of Baroda for misgovernment, and for the tour through India of the Prince of Wales (the late King Edward VII). The visit of the Duke of Edinburgh to India when Lord Mayo was Viceroy had given great pleasure to those with whom he had come in touch, and had established a kind of personal link between India and the Crown. The Prince of Wales' tour aroused unprecedented enthusiasm for and loyalty to the British Raj, and further encouragement was given to the growth of this spirit when, in a durbar of great magnificence held on January 1st, 1877, on the famous Ridge at Delhi, Queen Victoria was proclaimed Empress of India. The Viceroy of that time, Lord Lytton, had, however, to deal with a situation of unusual difficulty. Two successive years of drought produced, in 1877-78, the worst famine India had known. The most strenuous exertions were made to mitigate its effects, and eight crores of rupees were spent in importing grain; but the loss of life was estimated at 5½ millions. At this time also Afghan affairs once more became prominent.

Second Afghan War.

The Amir, Sher Ali, was found to be intriguing with Russia and that fact, coupled with his repulse of a British mission led to the second Afghan War. The British forces advanced by three routes—the Khyber, the Kurram, and the Bolan—and gained all the important vantage points of Eastern Afghanistan. Sher Ali fled and a treaty was made with his son Yakub Khan, which was promptly broken by the murder of Sir Louis Cavagnari, who had been sent as English envoy to Kabul. Further operations were thus necessary, and Sir F. (now Lord) Roberts advanced on the capital and defeated the Afghans at Charasia. A rising of the tribes followed, in spite of Sir D. Stewart's victory at Ahmed Kheyl and his advance from Kabul to Kandahar. A pretender, Sirdar Ayub Khan, from Herat prevented the establishment of peace, defeated Gen. Burrows' brigade at Maiwand, and invested Kandahar. He was routed in turn by Sir F. Roberts who made a brilliant march from Kabul to Kandahar. After the British withdrawal fighting continued between Ayub Khan and Abdur Rahman, but the latter was left undisputed Amir of Afghanistan until his death in 1901.

In the meantime Lord Lytton had resigned (1880) and Lord Ripon was appointed Viceroy by the new Liberal Government. Lord Ripon's administration is memorable for the freedom given to the Press by the repeal of the Vernacular Press Act, for his scheme of local self-government which developed municipal institutions, and for the attempt to extend the jurisdiction of the criminal courts in the Districts over European British subjects, independently of the race or nationality of the presiding judge. This attempt, which created a feeling among Europeans in India of great hostility to the Viceroy, ended in a compromise in 1884. Other reforms were the re-establishment of the Department of Revenue and Agriculture, the appointment of an Education Commission with a view to the spread of popular instruction on a broader basis, and the abolition by the Finance Minister (Sir Evelyn Baring, now Lord Cromer) of a number of customs duties. Lord Dufferin, who succeeded Lord Ripon in 1884, had to give his attention more to external than internal affairs: one of his first acts was to hold a durbar at Rawalpindi for the reception of the Amir of Afghanistan which resulted in the strengthening of British relations with that ruler. In 1885 a third Burmese war became necessary owing to the truculent attitude of King Thibaw and his intrigues with foreign Powers. The expedition, under General Prendergast, occupied Mandalay without difficulty and King Thibaw was exiled to Ratnagiri, where he died on 16th December 1916. His dominions of Upper Burma were annexed to British India on the 1st of January, 1886.

The Russian Menace.

Of greater importance at the time were the measures taken to meet a possible, and as it then appeared a probable, attack on India by Russia. These preparations, which cost over two million sterling, were hurried on because of a collision which occurred between Russian and Afghan troops at Penjdeh, during the delimitation of the Afghan frontier towards Central Asia, and which seemed likely to lead to a declaration of war by Great Britain. War was averted, but the Penjdeh incident had called attention to a menace that was to be felt for nearly a generation more; it had also served to elicit from the Princes of India an unanimous offer of troops and money in case of need. That offer bore fruit under the next Viceroy, Lord Lansdowne, when the present system of Imperial Service Troops was organised. Under Lord Lansdowne's rule also the defences of the North-Western Frontier were strengthened, on the advice of Sir Frederick (now Earl) Roberts, who was then Commander-in-Chief in India. Another form of precautionary measure against the continued aggression of Russia was taken by raising the annual subsidy paid by the Indian Government to the Amir from eight to twelve lakhs.

On the North-Eastern Frontier there occurred (1891) in the small State of Manipur a revolution against the Raja that necessitated an inquiry on the spot by Mr. Quinton, the Chief Commissioner of Assam. Mr. Quinton, the commander of his escort, and others, were treacherously murdered in a conference and the escort ignominiously retreated. This disgrace to British arms led to several attacks on frontier outposts which were brilliantly defeated. Manipur was occupied by British troops and the government of the State was reorganised under a Political Agent. Lord Lansdowne's term of office was distinguished by several other events, such as the passing of the Parliamentary Act (Lord Cross's Act, 1892), which increased the size of the Legislative Councils as well as the number of non-officials in them: legislation aimed at social and domestic reform among the Hindus: and the closing of the Indian Mints to the free coinage of silver (1893). In Burma great progress was made, under Sir Alexander Mackenzie, as Chief Commissioner: comparative order was established, and large schemes for the construction of railways, roads, and irrigation works were put in hand. (The Province was made a Lieutenant-Governorship in 1897).

Frontier Campaigns.

Lord Elgin, who succeeded Lord Lansdowne in 1894, was confronted at the outset with a deficit of Rs. 2½ crores, due to the fall in exchange. (In 1895 the rupee fell as low as 1*s.* 1*d.*) To meet this the old five per cent. import duties were reimposed on a number of commodities, but not on cotton goods: and within the year the duty was extended to piece-goods, but not to yarn. The reorganisation of the Army, which involved the abolition of the old system of Presidency Armies, had hardly been carried out when a number of risings occurred along the North-West Frontier. In 1895 the British Agent in Chitral—which had come under British influence two years previously when Sir H. M. Durand had demarcated the southern and eastern boundaries of Afghanistan—was besieged and had to be rescued by an expeditionary force. Two years later the Wazirs, Swatis, and Mohmands attacked the British positions in Malakand, and the Afridis closed the Khyber Pass. Peace was only established after a prolonged campaign (the Tirah campaign) in which 40,000 troops were employed, and over 1,000 officers

and men had been lost. This was in itself a heavy burden on the finances of India, which was increased by the serious and widespread famine of 1896-97 and by the appearance in India of bubonic plague. The methods taken to prevent the spread of that disease led, in Bombay, to rioting, and elsewhere to the appearance in the vernacular press of seditious articles which made it necessary to make more stringent the law dealing with such writings.

Lord Curzon's Viceroyalty.

With famine and plague Lord Curzon also, who succeeded Lord Elgin in 1899, had to deal. In 1901 the cycle of bad harvests came to an end; but plague increased, and in 1904 deaths from it were returned at over one million. Of the many problems to which Lord Curzon directed his attention, only a few can be mentioned here: some indeed claim that his greatest work in India was not to be found in any one department but was in fact the general gearing up of the administration which he achieved by his unceasing energy and personal example of strenuous work. He had at once to turn his attention to the North-West Frontier. The British garrisons beyond our boundary were gradually withdrawn and replaced by tribal levies, and British forces were concentrated in British territory behind them as a support. An attempt was made to check the arms traffic and work on strategic railways was pushed forward. The fact that in seven years he only spent a quarter of a million upon repressive measures and only found it necessary to institute one blockade (against the Mahsud Waziris) is the justification of this policy of compromise between the Lawrence and Forward schools of thought. In 1901 the trans-Indus districts of the Punjab were separated from that Province, and together with the political charges of the Malakand, the Khyber, Kurram, Tochi, and Wana were formed into the new North-West Frontier Province, under a Chief Commissioner directly responsible to the Government of India. That year also witnessed the death of Abdur Rahman, the Amir of Afghanistan, and the establishment of an understanding with his successor Habibullah. In 1904 the attitude of the Dalai Lama of Tibet being pro-Russian and anti-British, it became necessary to send an expedition to Lhasa under Colonel (Sir Francis) Younghusband. The Dalai Lama abdicated and a treaty was concluded with his successor.

Lord Curzon as Viceroy.

In his first year of office Lord Curzon passed the Act which, in accordance with the recommendations of the Fowler Commission, practically fixed the value of the rupee at 1*s.* 4*d.*, and in 1900 a Gold Reserve fund was created. The educational reforms that marked this Viceroyalty are dealt with elsewhere: chief among them was the Act of 1904 reorganising the governing bodies of Indian Universities. Under the head of agrarian reform must be mentioned the Punjab Land Alienation Act, designed to free the cultivators of the soil from the clutches of money-lenders, and the institution of Agricultural banks. The efficiency of the Army was increased (Lord Kitchener was Commander-in-Chief) by the re-armament of the Indian Army, the strengthening of the artillery, and the reorganisation of the transport service. In his relations with the Feudatory Chiefs, Lord Curzon emphasized their position as partners in administration, and he founded the Imperial Cadet Corps to give a military education to the sons of ruling and aristocratic families. In 1902 the British Government obtained from the Nizam a perpetual lease of the Assigned Districts of Berar in return for an annual payment of 25 lakhs. The accession of King Edward VII was proclaimed in a splendid Durbar on January 1, 1903. In 1904 Lord Curzon returned to England for a few months but was re-appointed to a second term of office, Lord Ampthill, Governor of Madras, having acted as Viceroy during his absence. The chief act of this second term was the partition of Bengal and the creation of a new Province of Eastern Bengal and Assam—a reform, designed to remove the systematic neglect of the trans-Gangetic areas of Bengal, which evoked bitter and prolonged criticism. In 1905 Lord Curzon resigned, being unable to accept the proposals of Lord Kitchener for the re-adjustment of relations between the Army headquarters and the Military Department of the Government, and being unable to obtain the support of the Home Government. He was succeeded by Lord Minto, the grandson of a former Governor-General. It was a stormy heritage to which Lord Minto succeeded, for the unrest which had long been noticed developed in one direction into open sedition. The occasion of the outburst in Bengal was the partition of that province. The causes of the flood of seditious writings and speeches, of the many attempts at assassination, and of the boycott of British goods are less easily definable. The mainspring of the unrest was "a deep-rooted antagonism to all the principles upon which Western society, especially in a democratic country like England, has been built up."

Political Outrages.

Outside Bengal attempts to quell the disaffection by the ordinary law were fairly successful. But scarcely any province was free from disorder of some kind and, though recourse was had to the deportation of persons without reason assigned under an Act of 1818, special Acts had to be passed to meet the situation, *viz*:—an Explosives Act, a Prevention of Seditious Meetings Act, and a Criminal Law Amendment Act which provides for a magisterial inquiry in private and a trial before three judges of the High Court without a jury. The need for this reinforcement of the law may be shown by a list of the principal political outrages in India while Lord Minto was Viceroy and subsequent to his departure:—

December, 1907.—Attempt to wreck the Lieutenant-Governor of Bengal's train at Naraingarh.

December, 1907.—Attempt on the life of Mr. B. C. Allen at Goalundo.

March, 1908.—Second attempt to wreck Sir Andrew Fraser's train at Chandernagore.

March, 1908.—Attempt to shoot Mr. Higginbotham, a missionary, at Kushtea.

April 11th, 1908.—Bomb thrown at the Mayor of Chandernagore.

April 30th, 1908.—Murder of Mrs. and Miss Kennedy at Mozafferpore.

August, 1908.—Mr. Camsie, Mill-manager, severely injured by a bomb on the E. B. S. Railway.

August, 1908.—Murder of Narendra Nath Gossain, the approver in the Alipore case, in Alipore Jail.

November 6th, 1908.—Attempt on the life of Sir Andrew Fraser at Overtoun Hall.

November 9th, 1908.—Murder of Inspector Nundo Lall Banerjee, who arrested Khudiram Bose, in Serpentine Lane, Calcutta.

November, 1908.—Sukumar, alleged informer, murdered at Dacca.

February 10th, 1908.—Murder of Babu Ashutosh Biswas in the Courtyard at Alipore.

June, 1909.—Prio Mohun Chatterji (brother of an approver) stabbed to death at Fatehjangpur.

July 1st, 1909.—Assassination of Lieutenant-Colonel Sir William Curzon Wyllie, at the Imperial Institute, London.

November 13th, 1909.—Bomb explosion near H. E. Lord Minto's carriage at Ahmedabad.

December 21st, 1909.—Assassination of Mr. A. M. T. Jackson, I.C.S., Collector of Nasik.

January 24th, 1910.—Murder of Khan Bahadur Shams-ul-Alum.

February 21st, 1911.—Murder of Head Constable Srish Chakravarty.

March 2nd, 1911.—Attempt to murder Mr. Cowley, P.W.D., with a bomb in Calcutta.

April 19th, 1911.—Babu Manmohan Dey, witness in Munshiganj bomb case, shot dead at Routhbog.

June 17th, 1911.—Murder of Mr. Ashe, Collector of Tinnevelly.

June 18th, 1911.—Murder of Sub-Inspector Raj Kumar Roy at Mymensingh.

July 1911.—Sonarang case, Rashun Dewan Duffadar, Amari-Dewan, and Kati Benode Chakravarti shot at Netrapati.

September 21st, 1912.—Head Constable Radhilal Roy shot dead at Dacca.

December 13th, 1912.—Attempt to assassinate Abdul Rahaman, one of the witnesses for the police in the Midnapore conspiracy case.

December 23rd, 1912.—H. E. Lord Hardinge wounded, and one of his servants killed, by a bomb during the State entry into Delhi.

March 27th, 1913.—Attempt to murder Mr. Gordon, the sub-divisional officer, with a bomb at Molvi Bazaar, Sylhet.

May 17th, 1913.—Chaprasi in the employ of the Lahore Gymkhana Club killed by a bomb near the Lawrence Gardens, Lahore.

September 29th, 1913.—Murder of Head Constable Haripado Deb, College Square, Calcutta.

September 30th, 1913.—Bankim Chandra Chowdhury, Inspector of Police at Mymensingh, formerly of Dacca, killed by a bomb.

January 19th, 1914.—Nripendra Nath Ghose, Inspector of the Calcutta C.I.D., shot dead on the Chitpur Road, Calcutta. A Teli boy, named Ananda, was also shot dead.

November 27th, 1914.—Seven persons committed to Ferozpore Sessions for shooting dead Sub-Inspector Bishrat Ali and Zemindar Jowala Singh.

February 28th, 1915.—Police Inspector Suresh Chandra Mukerji, who had been engaged in connexion with taxi-cab dacoities in Calcutta, shot dead while on duty by four men with revolvers. His orderly was wounded. The assassins escaped.

March 9th, 1915.—Mussalmanpura Bomb Case. Two bombs were thrown at the house occupied by Mr. Basant Kumar Chatterji, Deputy Superintendent of Police.

April 30th, 1915.—Lahore. Sedition trial. Three bombs, one revolver, one dagger and materials for bombs were found. The conspirators attempted to loot the Government treasury at Moga. They were met by Bishrat Alli, Sub-Inspector of Police. A scuffle ensued which culminated in the death of the Sub-Inspector as well as of Jowala Singh Ziladar.

August 25th, 1915.—Commissioner of Danihatti shot dead. A police constable seriously injured by several revolver shots fired from a Motor Car in an outrage near Calcutta.

October 9th, 1915.—Jatindra Mohun Ghose, Deputy Superintendent of Police and his son shot dead at Mymensingh.

October 22nd, 1915.—Sub-Inspector Girindra Nath Banerjee killed and another officer wounded in an attempt on the lives of four C. I. D. officers in Calcutta.

June 23rd, 1916.—Two police Officers named Surendra Bhushan Mukerji and Rohini Mukerji, of the Dacca Intelligence Branch, were shot dead.

The list, it will be seen, includes two attempts on the life of the Viceroy himself. It does not include a number of equally significant disturbances, such as the riots in Bombay (June 1908), during the trial of Tilak, which led to considerable loss of life. Concurrently with these repressive measures steps were taken to extend representative institutions. In 1907 a Hindu and a Mahomedan were appointed to the Secretary of State's Council, and in 1909 a Hindu was appointed for the first time to the Viceroy's Council. The Indian Councils Act of 1909 carried this policy farther by reconstituting the legislative councils and conferring upon them wider powers of discussion. The executive councils of Madras and Bombay were enlarged by the addition of an Indian member.

Lord Minto.

As regards foreign policy, Lord Minto's Viceroyalty was distinguished by the conclusion (1907) between Great Britain and Russia of an agreement on questions likely to disturb the friendly relations of the two countries in Asia generally, and in Persia, Afghanistan and Tibet in particular. Two expeditions had to be undertaken on the North-West frontier, against the Zakka Khels and the Mohmands; and ships of the East Indies Squadron were frequently engaged off Maskat and in the Persian Gulf in operations designed to check the traffic in arms through Persia and Mekran to the frontier of India. Towards Native States Lord Minto adopted a policy of less interference than that followed by his predecessor. He invited their views on sedition, and, in a speech at Udaipur, disclaimed any desire to force a uniform system of administration in Native States, and said he preferred their development with due regard to treaties and local conditions. Lord Minto left India in November, 1910, a few weeks after Lord Morley had resigned the Secretaryship of State, the tenure of their respective posts having been practically identical in point of time. The position of the Viceroy had in those years materially changed. Lord Minto had a weak Council, and this weakness was reflected in the government of Bengal and Madras; but it is more important to note that Lord Morley had extended the policy of transferring the actual government of India from India to London, to such an extent that the Under-Secretary for India was able to describe the Viceroy as merely the agent of the Secretary of State.

Visit of the King and Queen.

Sir Charles (Lord) Hardinge was appointed to succeed Lord Minto. His first year in India was marked by a weak monsoon and famine in parts of Western India, still more by the visit to India of the King Emperor and the Queen, who arrived at Bombay on December 2, 1911. From there they proceeded to Delhi where, in the most magnificent durbar ever held in India, the coronation was proclaimed and various boons, including an annual grant of 50 lakhs for popular education, were announced. At the same ceremony His Majesty announced the transfer of the capital of India from Calcutta to Delhi; the reunion of the two Bengals under a Governor-in-Council; the formation of a new Lieutenant-Governorship for Behar, Chota Nagpur, and Orissa, and the restoration of Assam to the charge of a Chief Commissioner. On December 14, a review of 60,000 British and Indian troops was held, and on the 15th Their Majesties each laid a foundation stone of the new capital. From Delhi the King went to Nepal, and the Queen to Agra and Rajputana, afterwards meeting at Bankipur and going to Calcutta. Thence they returned to Bombay and sailed for England on January 10. "From all sources, public and private," wrote His Majesty to the Premier, "I gather that my highest hopes have been realised.....Our satisfaction will be still greater if time proves that our visit has conduced to the lasting good of India and of the Empire at large."

In March, 1912, a committee of experts was appointed to advise the Government of India as to the site of the new capital. Temporary buildings were erected to accommodate the Government, and on December 23 the State entry into Delhi was made by the Viceroy. This ceremony was marred by an attempt on His Excellency's life as he passed down the Chandni Chauk. The bomb thrown from a house killed an attendant behind the Howdah in which the Viceroy was sitting, seriously wounded Lord Hardinge, but left Lady Hardinge unscathed. The courage displayed by Their Excellencies was unsurpassed and elicited the admiration of all; but, in spite of the offer of large rewards, the assassin was not caught.

Educational schemes claimed a large place in public attention during 1912 and 1913. In the former year a Royal Commission, under the presidency of Lord Islington, was appointed to inquire into the public services of India. In 1912 also a Committee of four was appointed, under the Chairmanship of Field Marshal Lord Nicholson, to inquire into military policy and expenditure in India. In the following year a Royal Commission was appointed, under the Chairmanship of Mr. Austen Chamberlain, to investigate and report on certain administrative questions relating to Indian finance and currency which had for some years been much discussed particularly in India.

In the North-East of India an expedition, under Gen. Bower, was despatched against the Abors for the punishment of the murderers of Mr. Noel Williamson.

In August, 1913, the demolition of a lavatory attached to a mosque in Cawnpore was made the occasion of an agitation among Indian Mahomedans and a riot in Cawnpore led to heavy loss of life. Of those present at the riot, 106 were put on trial but subsequently released by the Viceroy before the case reached the Sessions, and His Excellency was able to settle the mosque difficulty by a compromise that was acceptable to the local and other Mahomedans.

In October, 1913, it was announced that General Sir Beauchamp Duff had been appointed to succeed Sir O'Moore Creagh as Commander-in-Chief. This was a departure from the long tradition of alternately choosing the Commander-in-Chief from the British and the Indian Army. There were special reasons for the nomination of Sir Beauchamp Duff, who as Adjutant-General in India, and Chief of Staff during Lord Kitchener's term gave proof of his thorough knowledge of Indian conditions and his exceptional powers as a military administrator. The Military changes in India in 1905 and 1909 had profoundly modified the duties of the Commander-in-Chief and had conferred on him alone duties formerly divided between the Commander-in-Chief and the Military Member of Council and had made him the administrative head of the Army.

In the latter part of 1913 considerable feeling was aroused in India by the circulation of stories—many of them shown to be unfounded—about the ill-treatment of Indians in South Africa. Rioting by Indians in Natal was followed by the appointment by the Union Go-

vernment of a Committee of Inquiry at which the Government of India was represented by Sir Benjamin Robertson. The Commission's report afforded the basis of a settlement commonly regarded as equitable. In the autumn of 1914 the Viceroy, at a Council meeting, outlined a reciprocal scheme for controlling emigration in India and in the Colonies, as an alternative to the principle of free migration between all parts of the Empire, for which the Government of India had long contended.

In July the death of Lady Hardinge, wife of the Viceroy, took place in London after an operation. The courage she had displayed at Delhi when the Viceroy was wounded by a bomb, and the sympathetic and active interest she had displayed in the women and children of India, had endeared her to all classes. Her death was widely mourned, and her memory is to be perpetuated by a memorial originated by the Aga Khan.

Effects of the War.

The various effects of the European war upon India are fully discussed elsewhere. But it must here be set on record that the declaration of war was followed in India by an unprecedented declaration of loyalty on all sides, and the numerous offers of help or personal service made by the Chiefs and peoples aroused in England a feeling of intense gratitude. A military force numbering some 200,000 was sent from India to Europe and East Africa, within a short time of the outbreak of hostilities. The announcement of that fact was made on the same day that a message from the King-Emperor was published. In it His Imperial Majesty said:—"Amongst the many incidents that have marked the unanimous uprising of the populations of my Empire in defence of its unity and integrity, nothing has moved me more than the passionate devotion to my Throne expressed both by my Indian and English subjects and by the Feudatory Princes and Ruling Chiefs of India and their prodigious offers of their lives and their resources in the cause of the realm. Their one-voiced demand to be foremost in the conflict has touched my heart and has inspired to the highest issues the love and devotion which, as I well know, have ever linked my Indian subjects and myself." India was not included in the actual theatre of hostilities, except when Madras was subjected to a slight bombardment by the German cruiser "Emden;" but shipping in the Bay of Bengal and in the Arabian Sea was on several occasions interfered with, and several vessels were sunk, by enemy ships.

In spite of the war the year 1915 was one of comparative peace and order in India. A continuous effort was maintained in all parts of India to keep the troops at the front and the wounded on their return well supplied with "comforts," and the Princes and people of India contributed handsomely to the various war and relief funds.

The various measures taken in connexion with the war are related elsewhere in this volume. Here mention need be made only of a Bill passed in the Imperial Legislative Council which gave power to the Governor-General in Council to issue Regulations to insure the safety of the country and was modelled generally on the English Defence of the Realm Act. It also permitted the creation of a special tribunal of three Commissioners, of whom two must have qualifications of a sessions or an additional sessions judge, to hear cases made over to them by order of the local Government concerning breaches of regulations under the Act for any offence punishable with death, transportation, or imprisonment for a term of seven years. In connexion with the war also the Viceroy—whose term of office was extended by six months—made a journey up the Persian Gulf, visiting the oil works at Abadan, and Basra, Shaiba, and Kurna. On his return he visited Maskat, where there had been fighting in January.

There were several fights on the North-West frontier during the year, but the tribesmen never succeeded in penetrating far into British territory. In Bengal, as will be seen from the list of anarchical crimes quoted above, there were a number of signs that the spirit of lawlessness had by no means been stamped out. More serious, however, to the welfare of the country as a whole was the return in September, 1914 (see Indian Year Book, 1914) of a number of Sikh emigrants from British Columbia. The riot at Budge-Budge on that occasion gave a foretaste of the revolutionary plans entertained by many of these men. The sequel was seen in the Lahore Conspiracy case in which a Special Commission sentenced 24 persons to death, 27 to transportation for life, and six to terms of imprisonment. The judgment showed that a plot had been prepared with the object of overthrowing the Government, and the evidence in the case supported the idea that Germans had aided the conspirators and that at least after the war broke out the conspirators regarded themselves as leagued with the enemies of Great Britain. Of the death sentences 16 were subsequently commuted to transportation for life. The appeals in the Delhi Conspiracy case (See Indian Year Book, 1914, p. 650) were heard in the early part of the year—four by the Privy Council—and the sentences confirmed.

In the spring of 1916 Lord Hardinge, whose great services had just been rewarded with the Knighthood of the Garter, left India after receiving from all parts of the country proofs of the very high esteem in which he was held. His successor Lord Chelmsford had previous to his appointment served in India as an officer of a Territorial regiment.

The effects of the war were felt in a variety of ways, in the constant despatch of drafts for the expeditionary forces and in the reception of a very large number of sick and wounded, particularly from Mesopotamia. The fall of Kut and the general management of the campaign in Mesopotamia excited a great deal of criticism and resulted in the appointment of a committee of inquiry, in the recall of Sir Beauchamp Duff to give evidence, and in Sir Charles Monro being appointed to be Commander-in-Chief. An equal amount of criticism was directed to certain matters of internal administration, such as the sending of a troop train from Karachi across the

Sind desert in the hot weather which led to 15 deaths from heat stroke. Among the events of the war which particularly affected India were the death of Lord Kitchener, the loss of the P. & O. ss. Persia, and the revolt of the Sheriff of Mecca against the Turks. Portugal's action in joining the Allies was welcomed on account of the ancient connexion of Portugal with India; it led in the first instance to the seizure of a number of German and Austrian ships at Marmagoa.

Favoured by a good monsoon and other circumstances the cotton and jute industries attained to a pitch of great prosperity. The appointment of an industries commission gave promise of efforts to be made in the future to develop industrial India, and one way in which that can be done was illustrated in Burma where determined attempts were made to push forward the hitherto comparatively neglected wolfram industry.

During the year the foundation stone of the Hindu University at Benares was laid.

Developments in 1917.

The year 1917 was in many ways particularly eventful in India. In addition to continuing its former services in connexion with the war, the country assisted by assuming responsibility for 100 millions of the war debt and raising 40 crores by a War Loan, and by developing its resources with the help of a Munitions Board. But the part played by India in the war was more directly emphasised by her representation by H. H. the Maharaja of Bikanir and Sir S. P. Sinha at the meeting of the Imperial War Cabinet in London. Not for the first time was the war brought literally to the gates of India—by the laying of enemy mines off Bombay which led to the loss of the P.& O. S.S. Mongolia and other ships, while other India-bound vessels were lost off Cape Town and by submarine action in the Mediterranean and the Channel. The result of these attacks on shipping was the prohibition on women travelling to or from India through any war zone. The creation of the Indian Defence Force in place of the Volunteer Force, which came to an end on March 31, was an experiment which attracted the widest attention throughout the country and of which a detailed account is given elsewhere in this volume.

On the frontier it was necessary to undertake punitive measures against the Mahsuds, whose depredations for the past two years in Dera Ismail Khan and Bannu were followed by outrages on the Derajat border which could not be ignored. After a brief campaign the tribesmen were brought to a settlement, and in August the Waziristan Field Forces dispersed. A special Order of the Day issued by the Commander-in-Chief noted that for the first time the tribesmen on this part of the frontier had felt the power of the Royal Flying Corps, which carried out its duties with the dash and daring to which the Army has become accustomed." In the early part of the year judgment was delivered in the second supplementary Lahore conspiracy case (see above). It showed the wide-spread nature of the Ghard conspiracy and established beyond question that after the outbreak of war Germany consistently encouraged it and that the revolutionists eagerly associated themselves with Germany.

To the conclusions of the Public Services Commission and of the Mesopotamia Commission reference is made elsewhere in this book. The publication of the latter Commission's report led to the resignation of the Secretary of State, Mr. Chamberlain, who had proposed to visit India during the year, thus establishing a new precedent which was adopted by his successor, Mr. Montagu. The visit took place at a time when the movement in favour of Home Rule for India had attained to the highest pitch yet witnessed and at a time when, as was shown by the increase of Indian representation on the Council of India and by the grant of commissions in the Army to Indians, the Government was anxious to meet the wishes of the people so far as it could without departing from its policy of avoiding controversial political issues during the war.

The impulse which drove the British to India was not conquest but trade. The Government of India represents the slow evolution from conditions established to meet trading requirements On September 24, 1599, a few years before the deaths of Queen Elizabeth and Akbar, the merchants of London formed an association for the purpose of establishing direct trade with the East and were granted a charter of incorporation. The Government of this Company in England was vested in a Governor with a General Court of Proprietors and a Court of Directors. The factories and affairs of the Company on the East and West Coast of India, and in Bengal, were administered at each of the principal settlements of Madras (Fort St. George), Bombay and Calcutta (Fort William), by a President or Governor and a Council consisting of the senior servants of the Company. The three "Presidencies" were independent of each other and subordinate only to the Directors in England.

Territorial Responsibility Assumed.

The collapse of Government in India consequent on the decay of Moghul power and the intrigues of the French on the East Coast forced the officers of the Company to assume territorial responsibility in spite of their own desires and the insistent orders of the Directors. Step by step the Company became first the dominant, then the paramount power in India. In these changed circumstances the system of government by mutually independent and unwieldy councils of the merchants at the Presidency towns gave rise to grave abuses. Parliament intervened, and under the Regulating Act of 1773, a Governor-General and four councillors were appointed to administer the Presidency of Fort William (Bengal), and the supremacy of that Presidency over Madras and Bombay was for the first time established. The subordinate Presidencies were forbidden to wage war or make treaties without the previous consent of the Governor-General of Bengal in Council, except in cases of imminent necessity. Pitt's Act of 1784, which established the Board of Control in England, vested the administration of each of the three Presidencies in a Governor and three councillors, including the Commander-in-Chief of the Presidency Army. The control of the Governor-General-in-Council was somewhat extended, as it was again by the Charter Act of 1793. Under the Charter Act of 1833 the Company was compelled to close its commercial business, and it became a political and administrative body holding its territories in trust for the Crown. The same Act vested the direction of the entire civil and military administration and sole power of legislation in the Governor-General-in-Council, and defined more clearly the nature and extent of the control to be extended over the subordinate governments. After the Mutiny, there was passed, in 1858, an Act transferring the Government of India from the Company to the Crown. This Act made no important change in the administration in India, but the Governor-General, as representing the Crown, became known as the Viceroy. The Governor-General is the sole representative of the Crown in India; he is assisted by a Council, composed of high officials, each of whom is responsible for a special department of the administration.

Functions of Government.

The functions of the Government of India are perhaps the most extensive of any great administration in the world. It claims a share in the produce of the land and in the Punjab and Bombay it has restricted the alienation of land from agriculturists to non-agriculturists. It undertakes the management of landed estates where the proprietor is disqualified. In times of famine it undertakes relief work and other remedial measures on a great scale. It manages a vast forest property and is the principal manufacturer of salt and opium. It owns the bulk of the railways of the country, and directly manages a considerable portion of them; it has constructed and maintains most of the important irrigation works; it owns and manages the post and telegraph systems; it has the monopoly of the Note issue, and it alone can set the mints in motion. It lends money to municipalities, rural boards, and agriculturists and occasionally to owners of historic estates. It controls the sale of liquor and intoxicating drugs and has direct responsibilities in respect to police, education, medical and sanitary operations and ordinary public works of the most intimate character. The Government has also close relations with the Native States which collectively cover more than one-third of the whole area of India and comprise more than one-fifth of its population. The distribution of these great functions between the Government of India and the provincial administrations fluctuates; broadly speaking it may be said that the tendency of the day is to confine the Government of India to control and the Local Governments to administration.

Division of Responsibility.

The Government of India retains in its own hands all matters relating to foreign relations, defence, general taxation, currency, debt, tariffs, posts, telegraphs and railways. The ordinary internal administration—the assessment and collection of revenue, education, medical and sanitary arrangements, and irrigation, buildings and roads, fall within the purview of the Local Governments. In all these matters the Government of India exercises a general and constant control. It prescribes lines of general policy, and tests their application from the annual administration reports of the Local Authorities. It directly administers certain Imperial departments, such as Railways, Post Office, Telegraphs, the Survey of India and Geology; it employs a number of inspecting officers for those departments primarily left to Local Governments, including Agriculture, Irrigation, Forests, Medical and Archæology. It receives, and when necessary modifies, the annual budgets of Local Governments; and every new appointment of importance, and every large addition even to minor establishments has to receive its specific sanction. There also exists a wide field of appeal to the Government of India from officials or private individuals who may feel themselves aggrieved by the action of Local Governments; and outside the Presidencies of Madras, Bombay and Bengal, the approval of the Governor-General is necessary to the appointment of some of the most important officers of the provincial administration.

The supervision of the principal Native States rests directly with the Governor-General in-Council, but Local Governments have also responsibilities in this direction, where important States have historical association with them, and in the case of minor States.

Personnel of the Government.

The Governor-General and the "ordinary" members of his Council are appointed by the Crown. No limit of time is specified for their tenure of office, but custom has fixed it at five years. There are six "ordinary" members of Council, three of whom must, at the time of their appointment, have been at least ten years in the service of the Crown in India, one of the three remaining members must be a Barrister, the qualifications of the fifth and sixth are not prescribed by statute. The Indian civilians hold respectively the portfolios of Land Revenue and Agriculture, the Home, the Finance and the Education Departments. The Law Member has charge of the Legislative Department, and a member with English official experience has charge of the Commerce and Industry Department. The Viceroy acts as his own member in charge of Foreign affairs. Railways are administered by a Board of three members, whose chairman has the status of a Secretary, and are under the general control of the Commerce and Industry Department. The Commander-in-Chief may also be and in practice always is, an "extraordinary" member of the Council. He holds charge of the Army Department. The Governors of Madras, Bombay and Bengal become "extraordinary" members if the Council meets within their Presidencies. The Council may assemble at any place in India which the Governor-General appoints; in practice it meets only in Delhi and Simla.

Business Procedure.

In regard to his own Department each Member of Council is largely in the position of a Minister of State, and has the final voice in ordinary departmental matters. But any question of special importance, and any matter in which it is proposed to over-rule the views of a Local Government, must ordinarily be referred to the Viceroy. Any matter originating in one department which also affects another must be referred to the latter, and in the event of the Departments not being able to agree, the case is referred to the Viceroy. The Members of Council meet periodically as a Cabinet—ordinarily once a week—to discuss questions which the Viceroy desires to put before them, or which a member who has been over-ruled by the Viceroy has asked to be referred to Council. If there is a difference of opinion in the Council the decision of the majority ordinarily prevails, but the Viceroy can over-rule a majority if he considers that the matter is of such grave importance as to justify such a step. Each departmental office is in the subordinate charge of a Secretary, whose position corresponds very much to that of a permanent Under-Secretary of State in the United Kingdom; but with these differences—that the Secretary is present at Council meetings; that he attends on the Viceroy, usually once a week, and discusses with him all matters of importance arising in his Department; that he has the right of bringing to the Viceroy's special notice any case in which he considers that the Viceroy's concurrence should be obtained to action proposed by the Departmental Member of Council; and that his tenure of office is usually limited to three years. The Secretaries have under them Deputy, Under and Assistant Secretaries, together with the ordinary clerical establishments. The Secretaries and Under-Secretaries are usually members of the Indian Civil Service. The Government of India has no Civil Service of its own as distinct from that of the Provincial Governments, and officers serving under the Government of India are borrowed from the Provinces.

Government of India.

VICEROY AND GOVERNOR-GENERAL OF INDIA.

His Excellency the Right Hon. BARON CHELMSFORD, P. C., G.M.S.I., G.C.M.G., G.M.I.E., *assumed charge of office, 5th April*, 1916.

PERSONAL STAFF OF THE GOVERNOR-GENERAL.

Private Secretary, J. L. Maffey, C.I.E., I.C.S.

Military Secretary, Lieut.-Col. R. Verney, The Rifle Brigade.

Comptroller of the Household, Major J. Mackenzie, C.I.E., 35th Sikhs.

Asst. Private Secretary, B. J. Gould, I.C.S.

Aides-de-Camp, Captain J. A. Denny Grenadier Guards; Captain C. A. Lord Carnegie, Scot. Guards; Captain E. B. Baring; Captain W. Holland-Hibbert; Muhi-ud-din Khan; Risaldar-Major Sardar Bahadur, 31st Lancers; Karam Singh, Risaldar Major, 13th Duke of Connaught's Lancers.

Honorary Aides-de-Camp, Lumsden, R. Adml.W., R. N., C.V.O.; Stanyon, Hony. Col. H. J., C.I.E., V.D., Nagpur Volunteer Rifles; Cuffe, Hony. Lt.-Col. O. F. L. W., V.D., Upper Burma Vol. Rifles; Agabeg, Hony. Col. F. J., Chota Nagpur Light Horse; Grice, Hony. Col. W. T., V.D., 1st Battalion, Calcutta Vol. Rifles; Knowles, Hony. Col. J. G., C.I.E., V.D., Surma V.L. Horse; Warburton, Hony. Col. H. G., Luck. V. Rifles; Pugh, Hony. Col. A. J., V.D., Calcutta Light Horse; Reed, Hony. Lt.-Col. Sir Stanley, Bombay Light Horse; Henry, Hony. Col. W. D., C.I.E., Simla Vol. Rifles; Muhammad Ali Beg, Hony. Lt.-Col. Sir Nawab Bahadur, K.C.I.E., M.V.O., Commanding H. H. the Nizam's Forces; Zorawar Singh, Capt. Commandant, Bhawanagar Imperial Service Lancers; Maharaj Sher Singh, Commandant, 2nd Sardar Risala, Jodhpur Imperial Service Troops.

Wali Muhamad, Risaldar-Major (Hony. Capt.) Sardar Bahadur, late Governor-General's Body Guard; Abdul Azizh Risaldar-Maj. (Hony. Capt.) Sardar Bahadur, late 5th Cav.; Madho Singh Rana, Subadar-Major (Hony. Capt.) Sardar Bahadur, late 4th G. R.; Abdul Karim Khan, Risaldar-Major (Hony. Capt.) Sardar Bahadur, late Governor-General's Body-Guard; Mit Singh, Subadar-Major Sardar Bahadur, late 53rd Sikhs.

Indian Aides-de-Camp, Mahiuddin Khan, Risaldar Major Sardar Bahadur, 31st Lancers; Karam Singh, Risaldar Major, 13th Lancers.

Surgeon, Lieut.-Col. H. Austen-Smith, M. B., I.M.S.

Commandant of Body Guard, Capt. W. A. S. de Gale, 5th Cavalry.

COUNCIL.

Ordinary Members—

Sir G. S. Barnes, K.C.B. Took his seat, 6th April, 1916.
Sir William Henry Hoare Vincent.
Sir William Meyer, K.C.S.I., K.C.I.E. Took his seat, 30th June, 1913.
Sir C. H. A. Hill, K.C.S.I., C.I.E. Took his seat, 5th July, 1915.
Sir Sankaran Nair. Took his seat, 2nd November, 1915.
Sir G. R. Lowndes, K.C.S.I Took his seat, 20th December, 1915. (*Law*).

Extraordinary Member—

H. E. Gen. Sir Charles Carmichal Monro, G.C.M.G., K.C.B., Commander-in-Chief in India.

SECRETARIAT.

REVENUE AND AGRICULTURE DEPARTMENT.

Secretary, R. A. Mant.
Under Secretary, A. E. Gilliat, I.C.S.
Assistant Wheat Commissioner for India, C. W. Jacob, I.C.S.
Registrar, J. D. Shapcott.
Superintendents, W. A. Threlfall, C. H. Martin, H. H. Lincoln, T. McDonnell.

FINANCE DEPARTMENT.

Ordinary Branch.

Secretary, The Hon Mr. H.F. Howard, C.I.E., I.C.S.
Deputy Secretary, G. Rainy, I.C.S.
Under Secretary, A. A. L. Parsons, I.C.S.
Assistant Secretary, A. V. V. Aiyar, B.A.
Registrar, E. W. Baker, I.S.O.
Superintendents, M. H. Khan, G. W. C. Bradey, G.J. Piper. C. N. Chakrabarty, V. K. Menon, S. V. Aiyar, B.A., B.L., Shah Muhammad.
Comptroller and Auditor-General, Sir R. A. Gamble.
Controller of Currency, M. M. S. Gubbay, C.I.E., I.C.S. (On leave)
Officiating Controller of Currency, E. M. Cook, I.C.S.

Military Finance Branch.

Financial Adviser, Hon. Mr. G. B. H. Fell, C.I.E., I.C.S.
Military Accountant-General and ex-officio Deputy Financial Adviser, Col. B. W. Marlow, C.I.E., I.A.
Deputy Financial Adviser, W. C. Ashmore. (On leave).
Officiating Deputy Financial Adviser, Major E. B. Peacock, I.A.
Additional Deputy Financial Adviser, E. Burdon, I.C.S.
Assistant Financial Adviser, W. D. Gray.
Registrar, W. C. Gleeson.
Superintendents, G. E Hodges, C. M. Turner, A. W. Schönemann. F. J. Woolmer.

FOREIGN DEPARTMENT.

Political Secretary, Sir J. B. Wood, K.C.I.E.
Foreign Secretary, Sir A. H. Grant, K.C.I.E.
Officiating, D. de S. Bray, I.C.S.
Deputy Secretaries, C. C. Watson; *Officiating* (Foreign) Major W. G. Neale, I.C.S.

Under Secretary, R. R. Maconachie, I.C.S.
Assistant Secretary, Offg. T. G. B. Waugh.
Attache, Khan Bahadur Maula Baksh.
Registrar, Offg. C. W. Kirkpatrick.
Offg Inspector-General, Imperial Service Troops, Brigadier-General J. L. Rose.
Superintendents, E. L. Nile, D. A. Clarke, E. Betram Higgs, O. O., H. Telling, F. B. Buckner, J. W. S. Inglis, J. W. Edmondson, R. C. Albert, F. A. Emmer and K. D. Fink

HOME DEPARTMENT.

Secretary, Hon. Sir James du Boulay, K.C.I.E., C.S.I.
Deputy Secretary, S. R. Hignell, I.C.S.
Under Secretary, G. M. Young, I.C.S.
Registrar, G. F. Winn.
Superintendents, A. S. Lawrence, H. C. Marsden, P. K. Basu, Bijay Krishna Banerji, Ramani Mohan Ganguli and U. C. Stuart.

EDUCATION DEPARTMENT.

Secretary, Sir E. S. Maclagan, K.C.I.E., C.S.I.
Educational Commissioner with the Government of India, H. Sharp, C.I.E.
Senior Assistant Secretary, Kunwar Maharaj Singh.
Assistant Secretary, G. Anderson, M.A.
Superintendents, M. N. Chakrabarti, L. D. Harrington, A. H. Bartlett.
Registrar, R. H. Blaker.
Curator, Bureau of Education, G. R. Kage, F.R.A.S.

LEGISLATIVE DEPARTMENT.

Secretary, A. P. Muddiman, C.I.E.
Deputy Secretary, H. Monerieff Smith.
Attache, F. G. Rowland.
Legal Asst., S. C. Gupta.
Registrar, C. H. F. Pereira.
Superintendents, A. L. Banerj and E. H. Brandon.

ARMY DEPARTMENT.

Secretary, Hon'ble Lt.-General Sir W. R. Birdwood, C.B., K.C.S.I., C.I.E., D.S.O.
Secretary, sub. pro tem., Major-General A. H. Bingley.
Deputy Secretary, sub. pro tem., Lt.-Col. A. H. O. Spence.
Assist. Secretaries, Major G. D. Ogilvie, Major A. W. Chitty and A. A. Whelan.
Registrar, Mr. R. Tharle Hughes.
Superintendents, W. C. Debenham, A. B. Kunning, P. P. Hypher, Rai Sahib S. C. Biswas and J. C. R. Leslie.

PUBLIC WORKS DEPARTMENT.

Secretary, The Hon. F. C. Rose.
Deputy Secretary, A. J. R. Hope.
Under Secretary, D. G. Harris.
Assistant Secretary, W. J. Drake.
Superintendents, W. G. Dollman, W. I. Tilden, R. R. Reaks, H. M. Marchant, A. Hyde, and Rai Saheb H. N. Dass.
Inspr.-Genl. of Irrign., T. R. J. Ward, C.I.E., M.V.O.
Consg. Acht., J. Begg, F.R.I.B.A.
Elect. Adviser, J. W. Meares, F.R.A.S., M.I.C.E., M.I.E.E.

COMMERCE AND INDUSTRY DEPARTMENT.

Secretary, Hon. C. E. Low, C.I.E., I.C.S.
Deputy Secretary, A. H. Ley, I.C.S.
Under Secretaries, I. D. Elliott, I.C.S., and G. S. Hardy, I.C.S.
Actuary, H. G. W. Meikle.
Controller of Patents and Designs, H.G. Graves.
Attache, I. D. O. Elliott, I.C.S.
Registrar, E. P. Jones.
Superintendents, A. K. Sarkar, B. B. Banarji, S. N. Banarji, C. H. Baldrey, Fateh Din, D. O'Sullivan, K.D. Banerji and P. Wood-Collins.

RAILWAY BOARD.

President, The Hon. Sir R. W. Gillan, K.C.S.I., K.C.I.E. *Members*, G. C. Godfrey (Acting), F. D. Couchman M.I.C.E.
Secretary, F. A. Hadow.
Chief Engineer (Officiating), G. Richards, B.A., F.C.H.

POST OFFICE & TELEGRAPH DEPT.

Director-General of Posts & Telegraphs, Hon. Sir W. Maxwell, K.C.I.E., M.V.O.

NORTHERN INDIA SALT REVENUE.

Commissioner, Moberly, A. N.

INDO-EUROPEAN TELEGRAPH DEPARTMENT; *Persian Gulf and Persian Sections.*

Directors, E. E. Gunter; H. W. Smith, C.I.E.; W. King-Wood, C.I.E. (*offg.*), Commander of Cable Steamer "Patrick Stewart," F. W. Townsend.

SURVEY DEPARTMENT.

Surveyor-General of India, Col. Sir S. G. Burrard, K.C.S.I., R.E.

GEOLOGICAL SURVEY.

Director, H. H. Hayden, C.I.E., B.A.; F.G.S.
Superintendents, E. Vredenburg, B.Sc., F.G.S.; L. L Fermor, D.Sc., F.G.S.; E. H. Pascoe, M.A., D.Sc., F.G.S.
Chemist, W. A. K. Christie, B.Sc., Ph.D.

BOTANICAL SURVEY.

Director, Major A. T. Gage, M.B., I.M.S.; *Economic Botanist*, H. G. Carter, M.B.A.B.; *Economic Botanist, Madras*, F. R. Parnell; *Economic Botanist, Bombay*, W. Burns, B.Sc.; *Economic Botanist, United Provinces*, H. M. Leake, M.A., F.L.S.

ARCHÆOLOGICAL SURVEY.

Director-General of Archæology, Sir J. H. Marshall, M.A., C.I.E.; *Officiating Director General*, D. B. Spooner, B.A., P.L.D.; *Superintendent, Western Circle*, D. R. Bhandarkar, M.A.; *Superintendent, Southern Circle*, A. H. Longhurst; *Superintendent, Eastern Circle*, C. Duroiselle; *Superintendents, Northern Circle*, J. F. Blakiston: H. Hargreaves; *Superintendent, Burma*, C. Duroiselle, *Superintendent, Frontier Circle*, Sir M. A. Stein, K.C.I.E., Ph.D., D.Litt., D.Sc.

MISCELLANEOUS APPOINTMENTS.

Director-General, Indian Medical Service, Col. Edwards, I. M. S.
Sanitary Commissioner with the Government of India, Lt.-Col. W. W. Clemesha.
Deputy Director-General, Indian Medical Service, Bt.-Col. H. F. Cleveland, V.H.S., I.M.S.
Asstt. D. G. I.M.S., Major R. A. Needham.
Asstt. Director General, Indian Medical Service (Sany.), Major F. Norman White.
Director, Central Research Institute, Kasauli, Major W. F. Harvey. M.A., M.B., D.P.H., I.M.S.
Assistants to Director, Central Research Institute, Kasauli, Major E. D. W. Greig, Major E. C. Hodgson, Major S. R. Christophers. *Sub, pro tem.* Major J. Cunningham.
Director, Pasteur Institute of India, Kasauli, Major W. F. Harvey.
Asst. Director, Pasteur Institute of India, Kasauli, Major S. R. Christophers.
Superintendent, X-ray Institute, Dehra Dun, Major A. E. Walter, I.M.S.
Director, King Institute of Preventive Medicine, F. M. Gibson, M.B., B.Sc.
Asst. Director, King Institue of Preventive Medicine, Major W. S. Patton, M.B., I.M.S.

Director-General of Indian Observatories, G. T. Walker, C.S.I., M.A., D Sc., F.R.S.
Imperial Meteorologists, G. C. Simpson, D.Sc.; C. W. B. Normand; Hem Raj.
Director, Kodaikanal and Madras Observatories, J. Evershed.
Director, Bombay and Alibagh Observatories, Bombay, N. A. F. Moos.
Director, Aerological Observatory, Agra, J. H. Field, M.A.
Secretary, Board of Examiners, Capt. C. L. Peart, I.A.
Officer in Charge of the Records of the Government of India, A. F. Scholfield, M. A., (*offg.*)
Librarian, Imperial Library, Calcutta, J. A. Chapman.
Agricultural Adviser and Director of the Agricultural Research Institute, Pusa, B. Coventry, C.I.E.
Director, Zoological Survey of India, Indian Museum, N. Annandale, B.A., D.Sc.
Curator, Industrial Section of Indian Museum, D. Hooper. F.C.S., F.L.S.
Chief Inspector of Mines, G. F. Adams.
Controller of Printing, Stationery and Stamps, M. J. Cogswell.
Superintendent of Government Printing, J. J. Meikle.
Chief Inspector of Explosives, Lieut.-Col. C. A. Muspratt-Williams, R.A.
Administrator-General of Bengal, H. T. Hyde.
Director, Criminal Intelligence, Sir C. R. Cleveland, K.C.I.E.
Director-General of Commercial Intelligence, H. A. F. Lindsay, I.C.S.
Director of Statistics, G. F. Shirras.
Customs and Excise Chemist, R. L. Jenks.

GOVERNORS-GENERAL OF FORT WILLIAM IN BENGAL.

Name.	Assumed charge of office.
Warren Hastings	20 Oct. 1774
Sir John Machpherson, Bart. ..	8 Feb. 1785
Earl Cornwallis, K.G. (*a*) ..	12 Sep. 1786
Sir John Shore, Bart. (*b*) ..	28 Oct. 1793
Lieut.-General the Hon. Sir Alured Clarke, K.C.B. (*offg.*) ..	17 March 1798
The Earl of Mornington, P.C. (*c*)	18 May 1798
The Marquis Cornwallis, K. G. (2nd time)	30 July 1805
Sir George H. Barlow, Bart. ..	10 Oct. 1805
Lord Minto, P.C. (*d*)	31 July 1807
The Earl of Moira, K.G., P.C. (*e*) ..	4 Oct. 1813
John Adam (*offg.*)	13 Jan. 1823
Lord Amherst, P.C. (*f*)	1 Aug. 1823
William Butterworth Bayley (*offg.*)	13 Mar. 1828
Lord William Cavendish Bentinck, G.C.B., G.C.H., P.C.	4 July 1828

(*a*) Created Marquess Cornwallis, 15 Aug. 1792
(*b*) Afterwards (by creation) Baron Teignmouth.
(*c*) Created Marquess Wellesley, 2 Dec., 1799.
(*d*) Created Earl of Minto, 24 Feb., 1813.
(*e*) Created Marquess of Hastings, 2 Dec., 1816.
(*f*) Created Earl Amherst, 2 Dec., 1826.

GOVERNORS-GENERAL OF INDIA.

Name.	Assumed charge of office.
Lord William Cavendish Bentinck, G.C.B., G.C.H., P.C.	14 Nov. 1834
Sir Charles Metcalfe, Bart. (*a*) (*offg.*)	20 March 1835
Lord Auckland, G.C.B., P.C. (*b*)	4 March 1836
Lord Ellenborough, P.C. (*c*) ..	28 Feb. 1842
William Wilberforce Bird (*offg.*)	15 June 1844
The Right Hon. Sir Henry Hardinge, G.C.B. (*d*)	23 July 1844
The Earl of Dalhousie, P.C. (*e*) ..	12 Jan. 1848
Viscount Canning, P.C. (*f*)	29 Feb. 1856

(*a*) Afterwards (by creation) Baron Metcalfe.
(*b*) Created Earl of Auckland, 21 Dec., 1839.
(*c*) Afterwards (by creation) Earl of Ellenborough.
(*d*) Created Viscount Hardinge, 2 May, 1846.
(*e*) Created Marquess of Dalhousie, 25 Aug. 1849.
(*f*) Afterwards (by creation) Earl Canning.

NOTE.—The Governor-General ceased to be the direct Head of the Bengal Government from the 1st May, 1854, when the first Lieutenant-Governor assumed office. On 1st April, 1912, Bengal was placed under a separate Governor and the appointment of Lieutenant-Governor was abolished.

VICEROYS AND GOVERNORS-GENERAL OF INDIA.

Name.	Assumed charge of office.
Viscount Canning, P.C. (*a*) ..	1 Nov. 1858
The Earl of Elgin and Kincardine, K.T., G.C.B., P.C. ..	12 March 1862
Major-General Sir Robert Napier, K.C.B. (*b*) (*offg.*)	21 Nov. 1863
Colonel Sir William T. Denison, K.C.B. (*offg.*)	2 Dec. 1863
The Right Hon. Sir John Lawrence, Bart., G.C.B., K.C.S.I. (*c*) ..	12 Jan. 1864
The Earl of Mayo, K.P. ..	12 Jan. 1869
John Strachey (*d*) (*offg.*) ..	9 Feb. 1872
Lord Napier of Merchistoun, K. T. (*e*) (*offg.*)	23 Feb. 1872
Lord Northbrook, P.C. (*f*) ..	3 May 1872
Lord Lytton, G.C.B. (*g*)	12 Apl. 1876
The Marquess of Ripon, K.G., P.C.	8 June 1880
The Earl of Dufferin, K.P., G.C.B., G.C.M.G., P.C. (*h*)	13 Dec. 1884
The Marquess of Lansdowne, G. C. M. G.	10 Dec. 1888
The Earl of Elgin and Kincardine, P. C.	27 Jan. 1894
Baron Curzon of Kedleston, P.C.	6 Jan. 1899
Baron Ampthill (*offg.*)	30 Apl. 1904
Baron Curzon of Kedleston, P.C. (*i*)	13 Dec. 1904
The Earl of Minto, K. G., P. C., G. C. M. G.	18 Nov. 1905
Baron Hardinge of Penshurst, P.C., G.C.B., G.C.M.G., G.C.V.O., I.S.O (*j*)	23 Nov. 1910
Lord Chelmsford	Apl. 1916

(*a*) Created Earl Canning, 21 May 1859.
(*b*) Afterwards (by creation) Baron Napier (of Magdala).
(*c*) Afterwards (by creation) Baron Lawrence.
(*d*) Afterwards Sir John Strachey, G.C.S.I. C.I.E.
(*e*) Afterwards (by creation) Baron Napier of Ettrick.
(*f*) Afterwards (by creation) Earl of Northbrook.
(*g*) Created Earl of Lytton, 28 April, 1880.
(*h*) Created Marquis of Dufferin and Ava, 12 Nov. 1888.
(*i*) Created an Earl .. .. June 1911
(*j*) During tenure of office, the Viceroy is Grand Master and First and Principal Knight of the two Indian Orders (G.M.S.I., and G.M.I.E.). On quitting office, he becomes G.C.S.I. and G.C.I.E., with the date of his assumption of the Viceroyalty

The Imperial Legislative Council.

The constitution of the Executive Council of the Government of India has been sketched; for the purposes of legislation, and to bring the administration into close touch with public opinion, the Executive Council is expanded by additional members into a great legislative assembly. The first step was taken in 1861, when the Indian Councils Act provided that, for the better exercise of the power of making laws and regulations vested in the Governor-General-in-Council, he should nominate "Additional" members for the purposes of legislation only. The additional members were appointed for two years and joined the Council when it met for legislative purposes. The maximum number of members fixed by the Act was twelve, of whom not less than one half were to be non-officials (holding no office under the Government) and in practice most of the non-officials were natives of India. Similar legislative councils were constituted in some of the provinces, but the growth of these bodies will be considered when we come to deal with the provincial administrations.

The Act of 1892.

In 1892 important additions were made both to the constitution and the powers of the Legislative Council. The number of Additional members was raised to sixteen, and the representative principle was introduced. Whilst the method of appointment was, as before, nomination by the Governor-General, a certain number of nominations were made on the recommendation of specified persons, bodies and associations and in practice these recommendations were never refused. Of the sixteen Additional members, six were usually officials and ten non-officials. Four of the non-officials were nominated on the recommendation of the non-official members of the provincial Legislative Councils, the fifth was recommended by the Calcutta Chamber of Commerce, and the remaining five were chosen by the Governor-General, either with a special view to the legislative business to be transacted, or to secure the due representation of all classes The Council was also empowered to discuss the budget and to ask questions on matters of public interest.

Morley-Minto Reforms.

The Imperial Legislative Council took its present shape under what is commonly called the Morley-Minto reform scheme of 1909, and was embodied in the Indian Councils Act of that year. Two principles run through this scheme (1) to secure the fair representation of all the varied interests in the country and (2) to give the Council a real influence in determining the character of the administration. The Imperial Legislative Council now consists of sixty Additional members, of whom thirty-five are nominated by the Governor-General and twenty-five are elected by specified electorates. Of the nominated members not more than twenty-eight may be officials, and three others who must not be officials must be nominated by the Muhamedans of the Punjab, the landholders of the Punjab, and the Indian commercial community respectively. The remaining four seats are at the Governor-General's disposal to secure experts on special subjects or representatives of minor interests. Of the twenty-five elected members, eleven are selected by the non-official members of the provincial Legislative Councils, two by each of the four largest provinces and one by each of the three other provinces. A twelfth is elected by the District and Local Boards of the Central Provinces, as that administration has no legislative council. Six members are elected by electorates of landowners in six provinces, five by the Muhamedan community in each of the five provinces, and two by the Chambers of Commerce in Calcutta and Bombay. The Governor-General-in-Council has the exceptional power of excluding a candidate whose reputation and antecedents are such that his election would be contrary to the public interest. An oath, or affirmation of loyalty to the Crown is required of every member before he takes his seat. Members hold office for three years, and each triennium there is a general election for the Council.

Powers of the Council.

The additions to the non-legislative powers of the Council by the Act of 1909 were also substantial. The Council can exercise a material influence on the Budget. The Finance Member first presents the preliminary estimates with an explanatory memorandum. On a subsequent day he makes such further explanations as he thinks necessary. Members can thereupon move resolutions regarding any proposed alteration in taxation, any proposed loan, or any additional grant to Local Governments. When these resolutions are voted upon, the estimates are taken by groups, and resolutions may be moved on any heads of revenue or expenditure. Certain heads, as for instance, Customs and the Army, are excluded from discussion. The Finance Member takes these discussions into consideration, and then presents his final budget. He describes the changes made, and why any resolutions that have been passed have not been accepted. A general discussion of the budget then takes place, but no resolution may be moved, or vote taken. Government is not bound to act upon the resolution of the Council. This power is never likely to be used, because the Government has an official majority on that body. This official majority was specially prescribed by the Secretary of State, because as Parliament is, in the last resort, responsible for the good government of India, the British Government, through its mouthpiece, the Secretary of State, must have the means of imposing its will on the Government of India.

Apart from the Budget debates, members of Council now have the right to initiate the discussion of any question of public interest at any sitting of the Council by moving a resolution. The right of interpellation has also been expanded by the power of asking supplementary questions in order to elucidate a reply given to an original question. The President of the Council may disallow any question which, in his view, cannot be answered consistently with the public interests.

Control over Legislation.

The legislative powers of the Imperial Legislative Council are still regulated by the Act of 1861. Certain Acts of Parliament under which the Government of India is constituted cannot be touched and no law can be made affecting the authority of Parliament or allegiance to the Crown. With these exceptions the legislative powers of the Governor-General-in-Council over the whole of the British India are unrestricted. Measures affecting the public debt, or the revenues of India, the religion of any of His Majesty's subjects, the discipline or maintenance of the military or naval forces, and the relations of the Government with foreign states cannot be introduced by any member without the previous sanction of the Governor-General. Every Act requires the Governor-General's assent. The assent of the Crown is not necessary to the validity of an Act, but the Crown can disallow any Act that has been passed.

Apart from these legislative powers the Governor-General-in-Council is authorised to make, without calling in the Additional Members, regulations having the force of law for the less advanced parts of the country, where a system of administration simpler than that in force elsewhere is desirable. In cases of emergency the Governor-General can, on his own authority and without reference to his Council, make Ordinances which have the force of law for six months.

All Members of the Imperial and Provincial Legislative Councils are entitled to the prefix "Hon'ble Mr." during their term of office.

A.—Elected Members.

(*Not to be less than* 27.)

Serial No.	Name.	Electorate.
1	Rao Bahadur Narasimheswara Sarma Garu	Non-official Member, Madras.
2	Mr. Srinivasa Sastri	Do. do.
3	Sir Ibrahim Rahimtoola, Kt., C.I.E.	Do. Bombay.
4	Sir Dinsha Eduljee Wacha	Do. do.
5	Babu Bhupendra Nath Basu	Do. Bengal.
6	Rai Sita Nath Ray Bahadur	Do. do.
7	Dr. Tej Bahadur Sapru	Do. United Provinces.
8	Pandit Madan Mohan Malaviya	Do. do.
9	Sardar Bahadur Sardar Sundar Singh Majithia.	Do. Punjab.
10	Maung Bah Too, C.I.E.	Do. Burma.
11	Rai Bahadur Krishna Sahay	Do. Bihar and Orissa.
12	Mr. Kamini Kumar Chanda	Do. Assam.
13	Mr. M. B. Dadabhoy	District Councils and Municipal Committees Central Provinces.
14	Mr. K. Rangaswami Ayyangar	Landholders, Madras.
15	Khan Bahadur Sayad Allahandoshah	Do. Bombay. (Sardars of Gujarat.)
16	Maharaja Sir Manindra Chandra Nandi of Kasimbazar.	Landholders, Bengal.
17	Raja Sir Rampal Singh, K.C.I.E.	Do. United Provinces. (Landholders of Agra.)
18	Raja Rajend a Narayan Bhanja Deo	Do. Bihar and Orissa.
19	Rai Bahadur Bishan Dutt Shukul	Do. Central Provinces.
20	Khan Bahadur Mir Asad Ali Khan	Muhammadan Community, Madras.
21	Mr. Mahomed Ali Jinnah	Do. Bombay.
22	Mr. Abdur Rahim	Do. Bengal.
23	Khan Bahadur Nawab Saiyid Nawab Ali Chaudhuri.	Do. do.
24	Raja Sir Muhammad Ali Muhammad Khan, K.C.I.E., Khan Bahadur, of Mahmudabad.	Do. United Provinces.
25	Mr. Mazharul Haque	Do. Bihar and Orissa.
26	Sir E. H. Bray.	Bengal Chamber of Commerce.
27	Mr. Malcolm N. Hogg	Bombay Chamber of Commerce.

B.—Nominated Members.

(Not to exceed 33.)

Serial No.	Name.	Province or body represented.
	(*a*) OFFICIAL MEMBERS.	
	Not more than 28.	
1	Mr. M. E. Couchman	Madras
2	Mr. F. J. Monahan	Bengal.
3	Mr. C. A. Kincaid, C.V.O.	Bombay.
4	Mr. E. H. C. Walsh	Bihar and Orissa.
5	Sir Verney Lovett, K.C.S.I.	The United Provinces.
6	Mr. C. H. Atkins	The Punjab.
7	Lt.-Col. S. L. Aplin, C.S.I.	Burma.
	Sir J. Walker, K.C.I.E.	The Central Provinces.
9	Mr. W. J. Reid	Assam.
10	Sir J. S. Donald, K.C.I.E., C.S.I.	The N.-W. F. Province.
11	Mr. C. H. Kesteven	Government of India.
12	Mr. H. Sharp, C.I.E.	Do.
13	Sir William Maxwell, K.C.I.E., M.V.O.	Do.
14	Sir J. B. Wood, C.S.I., C.I.E.	Do.
15	Sir E. D. Maclagan, K.C.I.E., C.S.I.	Do.
16	Mr. R. A. Mant	Do.
17	Mr. F. C. Rose	Do.
18	Mr. A. P. Muddiman, C.I.E.	Do.
19	Sir R. A. Gamble	Do.
20	Mr. C. E. Low, C.I.E.	Do.
21	Sir R. W. Gillan, K.C.S.I.	Do.
22	Sir A. H. Grant, C.S.I., C.I.E.	Do.
23	Mr. G. B. H. Feil, C.I.E.	Do.
24	Major-General A. H. Bingley, C.B., C.I.E. ..	Do.
25	Mr. H. F. Howard, C.I.E.	Do.
26	Sir James DuBoulay	Do.
	(*b*) NON-OFFICIAL MEMBERS.	
1	Sir Fazulbhoy Currimbhoy, Kt., C.I.E.	Indian Commercial Community.
2	Khan Bahadur Mian Muhammad Shafi, C.I.E. ..	Muhammadan Community, Punjab.
3	Khan Zulfikar Ali Khan, C.S.I.	Landholders, Punjab.
4	Sub.-Major and Hon. Capt. Ajabkhan, Sardar Bahadur.	.....
5	Sir G. M. Chitnavis	.....

Present Constitution of the Council.

I.—The whole Council.

By the proviso to Regulation I for the Legislative Council of the Governor-General it is declared that it shall not be lawful for the Governor-General to nominate so many non-official persons that the majority of all the Members of the Council shall be non-officials.

Officials—		
(*a*)	Members of the Executive Council	7
(*b*)	The Lieutenant-Governor or Chief Commissioner of the Province (1)	1
(*c*)	Nominated Members	27
	Total	35
Non-Officials (2)—		
(*a*)	Elected Members	27
(*b*)	Nominated Members	5
	Total ..	32
Official majority, exclusive of the Governor-General		3

II.—The Additional Members.

The Indian Councils Act, 1861, section 10, provides that not less than one-half of the Additional Members (exclusive of the Lieutenant-Governor or Chief Commissioner of the Province (1) in which the Council may for the time being be assembled) shall be non-officials.

(Present number of Additional Members exclusive of the Lieutenant-Governor or Chief Commissioner (1) as aforesaid)	Officials (nominated)	26
	Non-officials (elected and nominated) ..	31
	Vacancies	3
	Total ..	60

(*For work of Imperial Legislative Council, Session* 1915-16, *q. v.*)

The Home Government.

The Home Government of India represents the gradual evolution of the governing board of the old East India Company. The affairs of the Company were originally managed by the Court of Directors and the General Court of Proprietors. In 1784 Parliament established a Board of Control, with full power and authority to control and direct all operations and concerns relating to the civil and military government, and revenues of India. By degrees the number of the Board was reduced and its powers were exercised by the President; the lineal precursor of the Secretary of State for India. With modifications this system lasted until 1858, when the Mutiny, followed by the assumption of the Government of India by the Crown, demanded a complete change. Under the Act of 1858 (now merged in the consolidating measure passed in 1915) the Secretary of State is the constitutional adviser of the Crown on all matters relating to India. He inherits generally all the powers and duties which were formerly vested either in the Board of Control, or in the Company, the Directors and the Secret Committee in respect of the Government and revenues of India. He has the power of giving orders to every officer in India, including the Governor-General, and is in charge of all business relating to India which is transacted in the United Kingdom.

Secretary of State's Powers.

Of these wide powers and duties many rest on his personal responsibility; others can be performed only in consultation with his Council, and for some of these the concurrence of a majority of the members of his Council is required. The Secretary of State may act without consulting the Council in all matters where he is not expressly required by statute to act as "Secretary of State in Council." Appointments by the Crown are made on his advice. Every official communication proposed to be sent to India must be laid before Council, unless it falls under either of two reserved classes. One of these is "Secret communications" dealing chiefly with war and peace, relations with foreign Powers and Native States. The others are those which he may deem "urgent." No matter for which the concurrence of a majority of Council is necessary can be treated as either "secret" or "urgent." In ordinary business, for which the concurrence of a majority of Council is not required, the Secretary of State is not bound to follow the advice of the Council. These provisions reserve to the Secretary of State a wide discretionary power of interference with the Government of India which is exercised in accordance with the temperament of the Secretary of State for the time being. But in all matters of finance, the authority is that of the Secretary of State and the Council and is freely exercised.

The Council.

The Council of India originally consisted of fifteen members appointed by the Secretary of State. By an Act passed in 1907 it now consists of such number of members, not being less than ten or more than fourteen, as the Secretary of State may from time to time determine. The members hold office for seven years, and this term may, for special reasons of public advantage, which must be laid before Parliament, be extended for five years more. Nine members must be persons who have served or resided in India for at least ten years, and who have not left India more than five years before their appointment. Several of them have usually belonged to the Indian Civil Service, and have been lieutenant-governors of provinces or members of the Viceroy's Executive Council; others are soldiers, educationists, bankers, or men of diplomatic, official, or mercantile experience. The object aimed at in the constitution of the Council is to give the Secretary of State, who has little knowledge of the details of the Indian administration, the help of a body of experts. In 1907, in connection with the policy of constitutional reform, two Indians, one a Hindu and the other a Mahomedan, were appointed to vacancies in the Council. Last year Mr. Chamberlain raised the number to three—two Hindus and a Mahomedan.

The India Office.

Associated with the Secretary of State and the India Council is a secretariat known as the India Office, housed at Whitehall. The Secretary of State has two Under-Secretaries, one permanent, the other parliamentary, and there are now two assistant Under-Secretaries. Appointments to the establishment are made by the Secretary of State in Council, but "junior situations" must be filled in accordance with the general regulations governing admission to the Home Civil Service.

The whole cost of the India Office is borne by the revenues of India, though the Home Government makes certain grants and remissions in lieu of a direct contribution amounting to £50,000 a year. The total net cost, including pensions is about £250,000 per annum.

Secretary of State.

The Right Hon. Edwin S. Montagu, M.P.

Under-Secretaries of State.

Sir Thomas W. Holderness, G.C.B., K.C.S.I.
The Right Hon. Lord Islington, G.C.M.G., D.S.O.

Assistant Under-Secretaries of State.

Sir Lionel Abrahams, K.C.B.
Sir Arthur Hirtzel, K.C.B.

Council.

Laurence Currie (retires 12th July 1918).
Sir William Duke, K.C.S.I., K.C.I.E.
Sir Charles Arnold White.
Sir Murray Hammick, K.C.S.I., C.I.E.
Sir Charles S. Bayley, G.C.I.E., K.C.S.I., I.S.O.
William Didsbury Sheppard, C.I.E.
Sir Marshall Frederick Reid, C.I.E.
General Sir E. G. Barrow, G.C.B., G.C.S.I.
James Bennett Brunyate, C.S.I., C.I.E.
Sahibzada Aftab Ahmed Khan.
Sir Prabhashankar D. Pattani, K.C.I.E.
Bhupendranath Basu.
Clerk of the Council, Sir Lionel Abrahams, K.C.B.
Deputy Clerk of the Council, James H. Seabrooke, C.I.E.

Private Secretary to the Secretary of State, C. H. Kisch.

Assistant Private Secretaries, A. L. R. Parsons, and Miss Freeth.

Political A.-D.-C. to the Secretary of State, Lieut.-Col. Sir J. R. Dunlop Smith, K.C.S.I., K.C.V.O., C.I.E.

Private Secretary to Sir T. W. Holderness, R. H. A. Carter.

Private Secretary to Lord Islington, R. H. A. Carter.

Correspondence Departments.

SECRETARIES.

Financial, W. Robinson and F. H. Lucas, C.B.

Judicial and Public, Malcolm C. C. Seton, C.B.

Military, Major-General Sir Herbert V. Cox, K.C.M.G., C.B., C.S.I., and J. H. Seabrooke, C.I.E.

Political and Secret, J. E. Shuckburgh.

Public Works, Hermann A. Haines.

Revenue and Statistics, Sir L. J. Kershaw.

Director-in-Chief of the Indo-European Telegraph, Public Works Department, R. C. Barker, C.I.E.

ACCOUNTANT-GENERAL'S DEPARTMENT:—

Accountant-General, Walter Badock, C.S.I., *also Director of Funds and Official Agent to Administrators-General in India.*

STORE-DEPARTMENT—INDIA OFFICE BRANCH:—*Director-General*, George H. Collier.

INDIA STORE DEPOT, *Belvedere Road, Lambeth, S. E. Superintendent*, Captain G. T. Wingfield, R. N.

REGISTRY AND RECORD DEPARTMENT.—*Registrar and Superintendent of Records*, W. Foster, C.I.E.

Miscellaneous Appointments.

Government Director of Railway Companies, Sir H. P. Burt, K.C.I.E.

Librarian, Fredk. W. Thomas, M.A.

Educational Adviser for Indian Students, T. W. Arnold, C.I.E., Litt. D., M.A.

Local Adviser to Indian Students in London, Mr. N. C. Sen (21, Cromwell Rd., S.W. 7).

President of Medical Board for the Examination of Officers of the Indian Services and Adviser to the Secretary of State on Medical matters, Surg.-Gen. Sir R. H. Charles, G.C.V.O., M.D., I.M.S. (retd.), F.R.C.S.I.; *Member of the Medical Board*, Lt.-Col. J. Anderson, M.B., I.M.S. (retd.)

Legal Adviser and Solicitor to Secretary o State, Sir Edward Chamier.

Inspector of Military Equipment and Clothing, Major-Gen. Sir John Steevens, K.C.B.

Surveyor and Clerk of the Works, T. H. Winny, A.R.I.B.A.

Ordnance Consulting Officer, Col. M.S.C. Campbell, C.I.E., R.A.

Officers of the Indian Army attached to the India Office—Colonels A. P. Harris, S. D. Gordon and Lieut.-Colonel Paddon.

Consulting Engineer, Sir A. M. Rendel, K.C.I.E.

Stockbroker, Horace Hubert Scott.

Auditor, H. A. Cooper.

Secretaries of State for India.

	Assumed charge
Lord Stanley, P.C. (*a*)	1858
The Right Hon. Sir Charles Wood, Bart. (*b*)	1859
Earl de Grey and Ripon, P.C. (*c*) ..	1866
Viscount Cranborne (*d*)	1866
The Right Hon. Sir Stafford Northcote, Bart. (*e*)	1867
The Duke of Argyll, K.T., P.C.	1868
The Marquis of Salisbury, P.C. (2nd time)	1874
The Right Hon. Gathorne Hardy, P.C., created Viscount Cranbrook, 14 May, 1878 (*f*)	1878
The Marquis of Hartington, P.C. (*g*)..	1880
The Earl of Kimberly, P.C.	1882
Lord Randolph Churchill, P.C. ..	1885
The Earl of Kimberley, K.G., P.C. (2nd time)	1886
The Right Hon. Sir Richard Assheton Cross, G.C.B., P.C., created Viscount Cross, 19 Aug., 1886	1886
The Earl of Kimberley, K.G., P.C. (3rd time)	1892
The Right Hon. H. H. Fowler (*h*) ..	1894
Lord George F. Hamilton, P.C. ..	1895
The Right Hon. St. John Brodrick (*i*)	1903
The Right Hon. John Morley, O.M. (*j*).	1905
The Right Hon. The Earl of Crewe, K.G.	1910
The Right Hon. Viscount Morley of Blackburn, O.M.	1911
The Right Hon. The Earl of Crewe, K.G. (*k*)	1911
The Right Hon. Austen Chamberlain, M.P.	1915
The Right Hon. E. S. Montagu, M.P...	1917

(*a*) Afterwards (by succession) Earl of Derby.

(*b*) ;; (by creation) Viscount Halifax.

(*c*) ;; (by creation) Marquess of Ripon.

(*d*) ;; (by succession) Marquess of Salisbury.

(*e*) ;; (by creation) Earl of Iddesleigh.

(*f*) ;; (by creation) Earl Cranbrook.

(*g*) ;; (by succession) Duke of Devonshire.

(*h*) ;; (by creation) Viscount Wolverhampton, G.C.S.I.

(*i*) ;; (by succession) Viscount Midleton.

(*j*) ;; (by creation) Viscount Morley of Blackburn, O.M.

(*k*) ;; (by creation) Marquess of Crewe, K.G.

India Council Bill.

In July 1913 Lord Crewe, Secretary of State for India, outlined in the House of Lords certain ideas for the reform of the India Council. The purport of these changes was to reduce the number of the Council, and to substitute departments, with certain independent powers, for the Committees which discharge the detailed work of the Council. Nothing more was heard of this scheme until June 1914, when there was published the text of the amending Bill, with an explanatory memorandum thereon.

Text of the Bill.

Appended is the full text of the Bill:—

1.—(1) The Council of India constituted under the Government of India Act, 1858 (which Act as amended by any subsequent enactment is hereinafter referred to as the principal Act), shall consist of such number of members, not less than seven nor more than ten, as the Secretary of State may from time to time determine.

(2) Unless at the time when an appointment is made to fill a vacancy in the Council two at least of the then existing members of the Council were at the time of their appointment domiciled in India, the person appointed to fill the vacancy must be domiciled in India, and unless at such time as aforesaid six at least of the then existing members were at time of their appointment either domiciled in India or were persons who had served or resided in India for at least ten years and had not ceased so to serve or reside more than five years before the date of their appointment, the person appointed to fill the vacancy must be either domiciled in India, or must have served or resided in India for at least ten years and have not ceased so to serve or reside more than five years before the date of his appointment.

The person appointed to fill a vacancy for which a person domiciled in India is alone eligible shall be selected from amongst the persons whose names appear on a list of persons domiciled in India chosen for the purpose by the members (other than official members) of the Legislative Councils of the Governor General, Governors, Lieutenant Governors and Chief Commissioners, in such manner, subject to such conditions and restrictions, and in such number, as may be prescribed by regulations to be made by the Secretary of State in Council, or by directions issued by the Secretary of State thereunder.

(3) The yearly salary to be paid to a member of the Council shall be one thousand two hundred pounds, provided that such members appointed after the commencement of this Act who at the date of their appointment shall be domiciled in India shall be paid an additional yearly allowance of six hundred pounds.

(4) Where the Secretary of State is of opinion that a person possessing special qualification as a financial expert should be appointed to be a member of the Council on special terms, he may, after recording in a minute to be laid before Parliament the special reasons for the appointment and the special terms on which the appointment is to be made, make the appointment, and the person so appointed shall, notwithstanding anything in the principal Act, or this Act, hold office for such term and on such conditions, and shall in respect thereof be entitled to such salary and to such pension, and other rights and privileges (if any) as His Majesty may, by Order in Council, in each case determine.

Provided that not more than one person appointed under this provision shall be a member of the Council at the same time.

2.—(1) Notwithstanding anything in section nineteen of the principal Act, it shall not be necessary for an order or communication sent to India or an order in the United Kingdom in relation to the government of India to be signed by a Secretary of State in such cases as the Secretary of State in Council may otherwise direct, but every such order and communication shall purport to be made by the Secretary of State in Council.

(2) For section twenty of the principal Act (which relates to the powers of the Secretary of State to divide the Council into committees, and to regulate the transaction of business in Council) the following section shall be substituted:—

It shall be lawful for the Secretary of State in Council to make rules and orders for the transaction of business as regards the powers which under the principal Act are to be exercised by the Secretary of State in Council:

"Provided that any such rule or order, so far as it affects any matter or question in respect of which the concurrence of a majority at a meeting of the Council is required by this Act, shall not be valid unless made with the concurrence of a majority of the members of Council present at the meeting of Council at which the rule or order is passed."

(3) Such rules and orders as aforesaid may, notwithstanding anything in sections twenty-two, twenty-four, twenty-five, and twenty-six of the principal Act, provide, as respects such matters as may be specified in the rules and orders,—

(*a*) for enabling powers of the Secretary of State in Council to be exercised otherwise than at a meeting of the Council, and where necessary for that purpose, for dispensing with any requirement of the principal Act as to the occurrence of the majority of votes of members of Council;

(*b*) for dispensing with the necessity of submitting to Council or depositing in the Council Room for the perusal of members, orders and communications proposed to be sent to India or to be made in the United Kingdom by the Secretary of State, and of recording and notifying to members of Council the grounds on which any order or communication to India has been treated as urgent.

(4) At a meeting of the Council the quorum shall be three, and meetings of the Council shall be convened and held when and as the Secretary of State may from time to time direct.

(5) Any document required by the principal Act to be signed by two or more members of the Council, either with or without the countersignature of the Secretary of State, or one of his Under Secretaries or Assistant Under Secretaries

may be signed in such manner as the rules and orders made by the Secretary of State in Council for the transaction of business in his Council may prescribe, and any such document, if signed in accordance with such rules and orders, shall be as valid as if it had been signed in accordance with the provisions of the principal Act.

(6) Section twenty-seven of the principal Act (which enables the Secretary of State to send certain secret orders without communicating them to the members of his Council) shall extend to any order, not being an order in respect of which concurrence of a majority at the meeting of the Council is required by the principal Act, which relates to any question gravely affecting the internal tranquillity of India, or the interests of India in any other country, or the peace or security of any part of His Majesty's Dominions, and which in the opinion of the Secretary of State is of the nature to require secrecy, and it is further declared that the said section shall apply to any order which the Secretary of State may send in reply to a despatch received and dealt with by him under section twenty-eight of the principal Act.

(7) All rules and orders made under this section shall be laid before Parliament as soon as may be after they are made, and if an address is presented to His Majesty by either House of Parliament within the next subsequent thirty days on which that House has sat after any such rule or order is laid before it praying that the rule or order may be annulled His Majesty in Council may annul the rule or order, and it shall henceforth be void but without prejudice to the validity of anything previously done thereunder.

The Bill Explained.

The publication of the Bill was accompanied by a memorandum explaining its provisions in the following terms:—

The object of this Bill is to amend the Government of India Act, 1858. The Act of 1858 in transferring the Government of India to the Crown, created the Council of India, defined its powers and those of the Secretary of State and prescribed in great detail the procedure to be followed in the transaction of business.

The Act of 1858 has, as regards the numerical strength of the Council and the conditions of office on it, been amended several times. The procedure for the transaction of business is practically unaltered.

By the Act of 1858 the strength of the Council was fixed at fifteen members, of whom not less than nine were to be persons who at the time of appointment had served or resided in India for ten years and had not last left India more than ten years. The members were to hold office during good behaviour, but were removable upon an address of both Houses of Parliament. Their salary was fixed at £1,200 a year.

These provisions have since been altered. The Council now consists of such number of members, not less than ten and not more than fourteen, as the Secretary of State may from time to time determine. Nine members must be persons who at the time of appointment had served or resided in India for ten years, and had not last left India more than five years. The terms of office is limited to seven years but the Secretary of State may re-appoint a member for a further period of five years. The salary is £1,000 a year. Since 1907 it has been the recognised practice of the Secretary of State to reserve two appointments on the Council for Indians.

The procedure for the transaction of business established by the Act of 1858 cannot be varied by rules. The powers of the Secretary of State in Council may be exercised only at meetings of the Council. A Council must be held every week and a quorum of five members is required. In certain matters, however trivial in themselves, the sanction of a majority of votes at a meeting is required. In other matters the Secretary of State may act alone, but except in cases where secrecy or urgency can be claimed, his proposed order must lie a week on the Council Table before it is sent. The Act contemplates that all business before coming to the Council should be dealt with in Committee, and the Council is divided for this purpose into several Standing Committees.

It is proposed by Clause 1 of the Bill to make certain changes in the strength and composition of the Council, and in the emoluments of the members. Also to take power to make rules for simplifying the business procedure of the Council.

With a simplified procedure much of the unimportant work that now occupies the time of the Standing Committees and the Council would be disposed of by the Secretary of State in communication with and with the assistance of individual members, Committees being specially nominated by him when required. A council of ten to fourteen members would then be needlessly large. It is proposed to fix the number at seven to ten, and to return to the rate of salary (£1,200 a year) allowed by the Act of 1858.

It is further proposed to convert the present practice of appointing two Indians to the Council into a statutory requirement, to provide that they shall be chosen from names submitted by Indian Legislative Councils, and to grant to them an allowance of £600 a year in addition to salary, in view of the expense of residing out of their own country.

Provision is also made to enable the Secretary of State to appoint to the Council a financial member on special terms as to salary, pension and tenure of office. The necessity for an exceptional power of this kind has been recognised by the Royal Commission on Indian Currency.

Clause 2 of the Bill provides for the simplification of business procedure. It enables the Secretary of State in Council to make rules to modify the procedure prescribed by the Act of 1858. The rules as and when made are to be laid before Parliament. The requirement of a weekly meeting of the Council is also dispensed with, and the quorum reduced. The opportunity is taken to enlarge in a way which experience has shown to be desirable the category of cases which may be dealt with by the Secretary of State in his "Secret" Department without informing or consulting his Council.

On the motion of Lord Curzon the House of Lords rejected the Bill by 96 votes to 38.

The Provincial Governments.

British India is divided into eight large provinces and six lesser charges, each of which is termed a Local Government. The eight major provinces are the Presidencies of Madras, Bombay, and Bengal; the Lieutenant-Governorships of the United Provinces, The Punjab, Burma, and Behar; and the Chief Commissionership of the Central Provinces. The minor provinces are Assam, the North-West Frontier Province, Baluchistan, Coorg, Ajmere Merwara and the Andaman Islands. The original division of British authority in India was between the Presidencies of Bengal, Madras and Bombay. Bengal afterwards developed into and was separated from the Government of India and then was gradually divided into provinces as the tide of conquest brought under administration areas too large to be controlled by a single authority. The status and area of these provinces have been varied from time to time to meet the changed conditions of the day. The most recent of these changes was the separation of the North-West Frontier from the Punjab in 1901; the division of Bengal into two provinces in 1905; and the final adjustment made in accordance with His Majesty the King's announcement at the Durbar of 1911, whereby the newly-created province of Eastern Bengal and Assam disappeared, and Bengal was re-divided into the Presidency of Bengal, the Lieutenant-Governorship of Behar and Orissa, and the Chief Commissionership of Assam, whilst the headquarters of the Government of India were moved from Calcutta to Delhi, and the City of Delhi, with an *enclave* of territory surrounding it, was taken under the direct administration of the Government of India. All Local Governments alike are under the superintendence and control of the Governor-General in Council. They must obey orders received from him, and they must communicate to him their own proceedings. But each Local Government is the Executive head of the administration within the province. By custom, all appointments to Local Governments are for a term of five years.

The Three Classes.

The three Presidencies occupy a superior position. The Civil administration of each is vested in a Governor-in-Council, appointed by the Crown, and usually drawn from English public life. On certain matters they correspond directly with the Secretary of State, a privilege not possessed by other provincial Governments. The Governors are assisted by a Council composed of three members, two members of the Civil Service and, under the Indian Councils Act of 1909, a fourth member who is usually an Indian. Like the Governor-General they are addressed as Your Excellency, and they are escorted by a body-guard. The maximum salaries as fixed by Act of Parliament are Rs. 1,20,000 for a Governor and Rs. 64,000 for a member of Council.

Lieutenant-Governors are appointed by the Governor-General subject to the approbation of the Crown. They must have served for at least ten years in India. Under the Indian Councils Act power was taken to create executive councils in the Lieutenant-Governorships and this has been applied to Behar where the Lieutenant-Governor is assisted by a Council consisting of two members of the Civil Service and one Indian. Lieutenant-Governors are addressed as Your Honour. Their maximum salary, Rs. 1,00,000, is fixed by Act of Parliament.

Chief Commissioners stand upon a lower footing, being delegates of the Governor-General-in-Council. In theory, a Chief Commissioner administers his province on behalf of the Governor-General-in-Council, who may resume or modify the powers that he has himself conferred. In practice, the powers entrusted to Chief Commissioner of the Central Provinces are as wide as those exercised by a Lieutenant-Governor. The salary of a Chief Commissioner is Rs. 50,000 but in the case of the Central Provinces this was raised to Rs. 62,000 in consideration of the addition of Berar to his Government.

Provincial Councils.

The changes made in the constitution and non-legislative functions of the Legislative Councils of Madras and Bombay by the Act of 1909 more than doubled the number of members, election by specially constituted electorates was introduced, and powers were given to members to debate and move resolutions on the provincial financial statements, to move resolutions on matters of general public interest, and to ask supplementary questions. A description of the system in Bombay will show how the scheme works. The Bombay Legislative Council is composed of four ex-*officio* members (the three members of the Executive Council and the Advocate-General) and 44 additional members. Of the additional members the Governor nominates twenty-three (of whom not more than fourteen may be officials) and 21 are elected. The Government is thus without a majority of officials in the Council. Of the elected members, eight are elected by groups of municipalities and the District Boards, four by Mahomedan electorates, and three by electorates of the land-holding classes. The Bombay University, the Bombay Municipal Corporation, the Bombay Chamber of Commerce, the Karachi Chamber of Commerce, and the Millowner's Association, and the Indian Commercial Community, each elect one member. The regulations for the formation of electorates, and as to the qualifications and disqualifications of candidates and voters, are similar to those made in the case of the Supreme Council.

The rules for the discussion of the annual financial statement are similar to those applicable to the Supreme Council. The Financial Statement is presented and considered as a whole and then in detail, and resolutions may be moved. The Government is not bound by any resolutions which the Council may pass. Matters of general public interest under the control of Local Governments may be made the subject of resolutions. Laws passed by these Legislative Councils require the sanction of the Governor-General and may be disallowed by the Crown.

In constitution, in functions, and in the system of special electorates, the Legislative Councils in the Lieutenant-Governorships resemble in all the essential particulars he Legislative Council of Bombay.

The Secretariat.

Each Local Government works through a Secretariat, which is divided into various departments, each under a Secretary. In addition to the Secretaries, there are special departmental heads such as the Inspectors General of Police, Jails, and Registration: the Director of Public Instruction, the Inspector-General of Civil Hospitals or Surgeon-General, the Sanitary Commissioner and the Superintendent of the Civil Veterinary Department. There are also Chief Engineers for Public Works and Irrigation, who are likewise Secretaries to Government. In nearly all the Provinces except Bombay, the revenue departments are administered, under Government, by a Board of Revenue.

The District Officer.

The administrative system is based on the repeated sub-division of territory, each administrative area being in the responsible charge of an officer who is subordinate to the officer next in rank above him. The most important of these units is the District, and India embraces more than 250 Districts, with an average area of 4,430 square miles and an average population of 931,000. In Madras there is no local officer above the head of the District: elsewhere a Commissioner has the supervision of a Division comprising from four to six Districts. The head of a District is styled either the Collector and District Magistrate or the Deputy Commissioner. He is the representative of the Government and embodies the power of the State. He is concerned in the first place with the land and the land revenue. He has also charge of the local administration of the excise, income tax, stamp duty and other sources of revenue. As a Magistrate of the first class, he can imprison for two years and fine up to a thousand rupees. In practice he does not try many criminal cases, although he supervises the work of the other Magistrates in the District.

In addition to these two main departments, the Collector is interested in all matters pertaining to the welfare of the people. In some branches of the administration his functions are, in consequence of the formation of special departments, such as those of Public Works, Forests, Jails, Sanitation, and Education less direct than was formerly the case. But even in matters dealt with by separate departments, his active co-operation and direction in counsel are needed. The Municipal Government of all considerable towns is vested in Municipalities but it is the duty of the Collector to guide and control their working. He is usually the Chairman of the District Board which, with the aid of subsidiary boards, maintains roads, schools and dispensaries, and carries out sanitary improvements in rural areas.

Other Officers.

Other important district officers are the Superintendent of Police, who is responsible for the discipline and working of the police force, and the Civil Surgeon, who (except in Bombay) is the head of the medical and sanitary administration. The local organisation of Government Public Works, Forests, Education and other special departments varies in different parts of the country. Each District has its own law officer, styled the Government Pleader.

The Districts are split up into sub-divisions, under Junior Officers of the Indian Civil Service or members of the Provincial Service called Deputy Collectors. In Madras, Bombay and the United Provinces there are smaller sub-district units called taluks or tahsils, administered by tahsildars (Bombay Mamlatdars), with naib tahsildars or mahalkarris. The tahsildar is assisted by subordinate officers, styled revenue inspectors or kanungos and the village officers. The most important of the latter are the headman who collects the revenue, the karnam, karkun or patwari who keeps the village accounts, and the chaukidar or village watchman.

Trend of Provincial Government.

The relations of the Provincial administrations with the Government of India form the subject of incessant discussion. On the one side there are the strong centralisers who would focus all authority in the Government of India; on the others those stout advocates of provincial autonomy who would make the Local Governments virtually independent of the Government of India. The trend of Indian policy since the departure of Lord Curzon has been steadily in the direction of increasing the authority of the Provincial Governments and the control and interference of the Government of India has been materially reduced, especially in financial matters. There was a marked development of this policy adumbrated in the despatch of the Government of India which submitted to the Secretary of State the proposal to remove the headquarters of the Government of India from Calcutta to Delhi. This paragraph thus indicated the ideas of the supreme authorities; although the extreme interpretation placed upon it by some Indian publicists had to be repudiated, it remains the most authoritative exposition of the trend of Indian policy.

The maintenance of British rule in India depends on the ultimate supremacy of the Governor-General in Council, and the Indian Councils Act of 1909, itself bears testimony to the impossibility of allowing matters of vital concern to be decided by a majority of non-official votes in the Imperial Legislative Council. Nevertheless it is certain that, in the course of time, the just demands of Indians for a larger share in the government of the country will have to be satisfied, and the question will be how this devolution of power can be conceded without impairing the supreme authority of the Governor General in Council. The only possible solution of the difficulty would appear to be gradually to give the Provinces a larger measure of self-Government, until at last India would consist of a number of administrations, autonomous in all provincial affairs, with the Government of India, above them all, and possessing power to interfere in case of misgovernment, but ordinarily restricting their functions to matters of Imperial concern. In order that this consummation may be attained, it is essential that the supreme Government should not be associated with any particular Provincial Government. The removal of the Government of India from Calcutta is, therefore, a measure which will, in our opinion, materially facilitate the growth of Local Self-Government on sound and safe lines It is generally recognised that the capital of a great central Government should be separate and independent, and effect has been given to this principle in the United States, Canada and Australia."

Administrative Divisions.

Provinces.	No. of Districts.	Area in Square miles.	Population (1911).
Ajmer Merwara	2	2,711	501,395
Andamans and Nicobars	....	3,143	26,459
Assam	12	52,959	6,713,635
Baluchistan	6	45,804	414,412
Bengal	28	78,412	45,483,077
Bihar and Orissa	21	83,205	34,490,084
Bombay (Presidency)	26	123,064	19,672,642
Bombay	26	75,918	16,113,042
Sind	6	47,066	3,513,435
Aden	....	80	46,165
Burma	41	236,738	12,115,217
Central Provinces and Berar	22	100,345	13,916,308
Coorg	1	1,582	174,976
Madras	24	141,726	41,405,404
North-West Frontier Province (Districts and administered Territories)	5	16,466	2,196,933
Punjab	29	97,209	19,974,956
United Provinces of Agra & Oudh	48	107,164	47,182,044
Agra	36	83,198	34,624,040
Oudh	12	23,966	12,558,004
Total British Territory	267	1,097,901	244,267,542

States and Agencies.	No. of Districts.	Area in Square miles.	Population (1911).
Baluchistan States	....	86,511	396,432
Baroda State	....	8,099	2,032,798
Bengal States	....	32,773	4,538,161
Bombay States	....	65,761	7,411,567
Central India Agency	....	78,772	9,356,980
Central Provinces States	....	31,188	2,117,002
Eastern Bengal and Assam States	....	....	575,835
Hyderabad State	....	82,698	13,374,676
Kashmir State	....	80,900	3,158,126
Madras States	....	9,969	4,811,841
Cochin State	....	....	918,110
Travancore State	....	....	3,428,975
Mysore State	....	29,444	5,806,193
North-West Frontier Province Agencies and Tribal areas).	....	....	1,622,094
Punjab States	....	36,532	4,212,794
Rajputana Agency	....	127,541	10,530,432
Sikkim	....	....	87,920
United Provinces States	....	5,079	832,036
Total Native States	....	675,267	70,864,995
Grand Total, India	....	1,773,168	315,132,537

The Bombay Presidency.

The Bombay Presidency stretches along the west coast of India, from Sind in the North to Kanara in the South. It embraces, with its feudatories and Aden, an area of 186,923 square miles and a population of 27,084,317. Of this total 65,761 square miles are in Native States, with a population of 7,411,675. Geographically included in the Presidency but under the Government of India is the first class Native State of Baroda, with an area of 8,182 square miles and a population of 2,032,798. The outlying post of Aden is under the jurisdiction of the Bombay Government: it has an area of 80 square miles and a population of 46,165.

The Presidency embraces a wide diversity of soil, climate and people. In the Presidency Proper are the rich plains of Gujarat, watered by the Nerbudda and the Tapti, whose fertility is so marked that it has long been known as the Garden of India. South of Bombay City the province is divided into two sections by the Western Ghats, a range of hills running parallel to the coast. Above Ghats are the Deccan Districts, with a poor soil and an arid climate, south of these come the Karnatic districts. On the sea side of the Ghats is the Konkan, a rice-growing tract, intercepted by creeks which make communication difficult. Then in the far north is Sind, totally different from the Presidency Proper, a land of wide and monotonous desert except where irrigation from the Indus has brought abounding fertility.

The People.

The population varies as markedly as soil and climate. In Sind Mahomedans predominate. Gujarat has remained true to Hinduism although long under the dominion of powerful Mahomedan kings. Here there is an amplitude of caste divisions, and a people, who although softened by prosperity, are amongst the keenest trading races in the world. The Deccan peasant has been seasoned by adversity; the saying goes that the Deccan expects a famine one year in every three, and gets it; the population is much more homogeneous than in Gujarat, and thirty per cent. are Mahrattas. The Karnatic is the land of the Lingayets, a Hindu reforming sect of the twelfth century, and in the Konkan there is a large proportion of Christians. Four main languages are spoken, Sindi, Gujarati, Marathi and Kanarese, with Urdu a rough *lingua franca* where English has not penetrated. The main castes and tribes number five hundred.

Industries.

The principal industry is agriculture, which supports sixty-four per cent. of the population. In Sind the soils are wholly alluvial, and under the influence of irrigation produce yearly increasing crops of wheat and cotton. In Gujarat they are of two classes, the black cotton soil, which yields the famous Broach cottons, the finest in India, and alluvial which under careful cultivation in Ahmedabad and Kaira makes splendid garden land. The dominant soil characteristic of the Deccan is black soil, which produces cotton, wheat, gram and millet, and in certain tracts rich crops of sugar cane. The Konkan is a rice land, grown under the abundant rains of the submontane regions, and in the south the Dharwar cotton vies with Broach as the best in India. There are no great perennial rivers suitable for irrigation, and the harvest is largely dependent upon the seasonal rainfall, supplemented by well irrigation. A chain of irrigation works, consisting of canals fed from great reservoirs in the region of unfailing rainfall in the Ghats, is gradually being completed, and this will ultimately make the Deccan immune to serious drought. More than any other part of India the Presidency has been scourged by famine and plague during the past twenty years. The evils have not been unmixed, for tribulation has made the people more self-reliant, and the rise in the values of all produce, synchronising with a certain development of industry, has induced a considerable rise in the standard of living. The land is held on what is known as the ryotwari tenure, that is to say, each cultivator holds his land direct from Government under a moderate assessment, and as long as he pays this assessment he cannot be dispossessed.

Manufactures.

Whilst agriculture is the principal industry, others have no inconsiderable place. The mineral wealth of the Presidency is small, and is confined to building stone, salt extracted from the sea, and a little manganese. But the handicrafts are widely distributed. The handloom weavers produce bright-coloured saris, and to a diminishing extent the exquisite kincobs of Ahmedabad and Surat. Bombay silver ware has a place of its own, as well as the brass work of Poona and Nasik. But the tendency is to submerge the indigenous handicrafts beneath industry organised on modern lines. Bombay is the great centre in India of the textile trade. This is chiefly found in the headquarter city, Bombay, where the industry embraces 29,94,367 spindles and 51,846 looms and employs 1,11,924 hands and consumes 35,91,175 cwts. of cotton. This industry is now flourishing, and is steadily rising in efficiency. In lieu of producing immense quantities of low grade yarn and cloth, chiefly for the China market, the Bombay mills now turn out printed and bleached goods of a quality which improves every year, and the principal market is at home. Whilst the industry centres in Bombay City, there are important offshoots at Ahmedabad, Broach and Sholapur. In Ahmedabad there are 10.17.800 spindles and 21,508 looms; in Sholapur 2,37,839 spindles and 3,730 looms; and in the Presidency 48,03,932 spindles and 85,388 looms. It is expected that the prosperity of the Bombay trade will be quickened, as a project, now in operation, for the substitution of electricity for steam—the electricity is generated at a hydro-electric station in the Ghats, fifty miles distant—furnishes cheap and efficient power. Its situation on the western-sea-board, in touch at once with the principal markets of India and the markets of the west, has given Bombay an immense sea-borne trade. The older ports, Surat, Broach, Cambay and Mandvie, were famous in the ancient days, and their bold and hardy mariners carried Indian commerce to the Persian Gulf and the coasts of Africa. But the opening of the Suez Canal and the increasing size of ocean steamers have tended to concentrate it in modern ports with deep water anchor-

ages, and the sea-borne trade of the Presidency is now concentrated at Bombay and Karachi, although attempts are being made to develop Mormugao, in Portuguese territory, into an outlet for the trade of the Southern Mahratta Country. The Customs returns on the basis of values show the trade of the Port of Bombay during the year 1915-16 as Rs. 140¾ crores (£93,831,000). The decrease, as compared with the previous year, exclusive of Government transactions, was about Rs. 8½ crores, or approximately 6 per cent.

Administration.

The Presidency is administered by a Governor-in-Council. The Governor is appointed by the Crown, and is usually drawn from the ranks of those who have made their mark in English public life. He is assisted by a Council of three members, two of whom are drawn from the Indian Civil Service, and the third in practice is an Indian. Each Member takes special charge of certain departments, and cases where differences of opinion occur, or of special importance, are decided "in Council." All papers relating to public service business reach Government through the Secretariat, divided into five main departments each under a Secretary (*a*) Revenue and Financial: (*b*) Political, Judicial, and Special: (*c*) General, Educational, Marine and Ecclesiastical: (*d*) Ordinary Public Works: (*e*) Irrigation. The senior of the three Civilian Secretaries is entitled the Chief Secretary. The Government frequently moves. It is in Bombay from November to the end of March; at Mahableshwar from April to June; in Poona from June to September; and at Mahableshwar from October to November; but the Secretariat is always in Bombay. Under the Governor-in-Council the Presidency is administered by four Commissioners. The Commissioner in Sind has considerable independent powers. In the Presidency Proper there are Commissioners for the Northern Division, with headquarters at Ahmedabad; the Central Division at Poona; and the Southern Division at Belgaum. Each district is under a Collector, usually a Covenanted Civilian, who has under him one or more Civilians as Assistant Collectors, and one or more Deputy Collectors. A collectorate contains on an average from eight to ten talukas, each consisting of from one to two hundred villages whose whole revenues belong to the State. The village officers are the patel, who is the head of the village both for revenue and police purpose; the talati or kulkarni, clerk and accountant; the messenger and the watchman. Over each Taluka or group of village is the mamlatdar, who is also a subordinate magistrate. The charge of the Assistant Deputy Collector contains three or four talukas. The Collector and Magistrate is over the whole District. The Commissioners exercise general control over the Districts in their Divisions. The control of the Government over the Native States of the Presidency is exercised through Political Agents.

Justice.

The administration of justice is entrusted to the High Court sitting in Bombay, and comprising a Chief Justice, who is a barrister, and six puisne judges, either Civilians, Barristers, or Indian lawyers. In Sind the Court of the Judicial Commissioner (three judges, one of whom must be a barrister) is the highest court of civil and criminal appeal. Of the lower civil courts the court of the first instance is that of the Subordinate Judge recruited from the ranks of the local lawyers. The Court of first appeal is that of the District or Assistant Judge, or of a first class subordinate judge with special powers. District and Assistant Judges are Indian Civilians, or members of the Provincial Service. In cases exceeding Rs. 5,000 in value an appeal from the decision of the Subordinate or Assistant Judge and from the decision of the District Judge in all original suits lies to the High Court. District and Assistant Judges exercise criminal jurisdiction throughout the Presidency, but original criminal work is chiefly disposed of by the Executive District Officers. Capital sentences are subject to confirmation by the High Court. In some of the principal cities Special Magistrates exercise summary jurisdiction (Bombay has four Presidency Magistrates, as well as Honorary Magistrates exercising the functions of English Justices of the Peace) and a Court of Small Causes, corresponding to the English Country Courts.

Local Government.

Local control over certain branches of the administration is secured by the constitution of local boards and municipalities, the former exercising authority over a District or a Taluka, and the latter over a city or town. These bodies are composed of members either nominated by Government or elected by the people, who are empowered to expend the funds at their disposal on education, sanitation, the construction of roads and tanks, and general improvements. Their funds are derived from cesses on the land revenue, the toll and ferry funds. The tendency of recent years has been to increase the elective and reduce the nominated element, to allow these bodies to elect their own chairmen, whilst large grants have been made from the general revenues for water supply and drainage.

Finance.

The finance of the provincial governments is marked by definite steps toward provincial financial autonomy. Up to 1870 there was one common purse for all India. Since then progressive steps have been taken to increase the independence of local Governments. Broadly, certain heads of revenue are divided with the Imperial Government, whilst certain growing heads of revenue, varying in each province, are allotted to the local Government. Thus in Bombay the land revenue, stamp revenue and revenue from assessed taxes are divided with the Government of India. All other local sources of revenue go intact to the local Government. The provincial Budget for 1916-17 shows an opening balance of Rs. 143 lakhs, revenue 751 lakhs, expenditure 754 lakhs and the closing balance Rs. 141 lakhs. These large balances are due to grants from the Imperial Governments for non-recurring expenditure.

Public Works.

The Public Works Department is under the control of two Chief Engineers who act as Secretaries to the Government; one for General Works and the other for Irrigation

Under them are Superintending Engineers in charge of divisions and Executive Engineers in charge of districts, with the Consulting Architect. The chief irrigation works are in Sind and consist of a chain of canals fed by the annual inundations from the Indus and one perennial canal the Jamrao. In the Presidency proper the principal protective works are the Nera Canal, Gokak Canal, Mutha Canal and the Godaveri Canal Scheme. In addition there is under construction a chain of protective irrigation works, originating in reservoirs in the Ghat regions. The first of these the Godavari Scheme, is now in operation, the Pravara Scheme and the Nira Scheme are progressing steadily. The Public Works budget for the current year is 77·5 lakhs of rupees.

Police.

The Police Force is divided into three categories: District Police, Railway Police and the Bombay City Police. The District Police are under the Inspector-General who is either a member of the Gazetted Force or a Covenanted Civilian. Under him are the Deputy Inspector-Generals for Sind and the Northern and Southern Ranges of the Presidency proper, for Railways and for Criminal Investigation. District Superintendents of Police have charge of each District with a regular cadre comprising Assistant Superintendents, Sub-Inspectors, Chief Constables and Constables. The Bombay City Police is a separate force maintained by Government under a Commissioner who is responsible direct to Government. The Training School at Nasik prepares young gazetted officers and the rank and file for their duties. The cost of the Police is 110 lakhs.

Education.

Education is imparted partly through direct Government agency, partly through the medium of grants-in-aid. Government maintain Arts Colleges at Bombay, Poona and Gujarat; the Grant Medical College, the Poona College of Science, the Agricultural College, Veterinary College, School of Art, Law School and a College of Commerce. A Science College in Bombay is now in course of construction. Also in Bombay City, and the headquarters of each district, a model secondary school. The other secondary schools are in private hands; the majority of the primary schools are maintained by District and Local Boards with a grant-in-aid. The Bombay Municipality is responsible for primary education in Bombay City. There are now in the Presidency 7 Arts Colleges, 4,702 Scholars; 142 High Schools; 42,215, Scholars; 323 Middle Schools, 25,934 Scholars and 10,890 Primary Schools, 6,70,141 Scholars. The Government Educational Budget is 77·54 lakhs.

The Educational Department is administered by a Director, with an Inspector in each Division and a Deputy Inspector with Assistants in each district. Higher education is controlled by the Bombay University (established in 1857) consisting of the Chancellor (the Governor of the Presidency), the Vice-Chancellor (appointed by Government for two years), and 110 Fellows of whom 10 are *ex-officio*; 10 elected by the Graduates, 10 by the Faculties, and 80 are nominated by the Chancellor.

The principal educational institutions are:—

Government Arts Colleges—

Elphinstone College, Bombay, Principal Covernton.
Deccan College, Poona, Principal Mr. F. W. Bain.
Gujarat College, Ahmedabad, Principal the Rev. W. G. Robertson.
Dharwar College, Principal Mr. H. G. Rawlinson.

Private Arts Colleges—

St. Xaviers, Bombay (Society of Jesus), Principal Rev. Father Goodier.
Wilson College, Bombay (Scottish Mission), Principal Rev. Dr. Mackichan.
Ferguson College, Poona (Deccan Educational Society), Principal the Hon'ble Mr. R. P. Paranjpe.
Baroda College, Baroda (Baroda State), Principal Mr. Clarke.
Samaldas College, Bhavnagar (Bhavnagar State), Principal Mr. Unwalla.
Bahauddinbhai College, Junagadh State, Principal Mr. Scott.

Special Colleges—

Grant Medical College, Bombay (Government), Principal Lt.-Col. Street, I.M.S.
College of Science, Poona (Government) Principal Dr. Allen.
Agricultural College, Poona (Government), Principal Dr. Harold Mann.
Chiefs' College, Rajkot, Principal Mr. Mayne.
College of Science, Ahmedabad.
Law School, Bombay, Principal, Mirza Ali Akbar Khan.
College of Commerce, Bombay, Principal, Mr. P. Anstey.
Veterinary College, Bombay, Mr. K. Hewlett.
Bombay Bacteriological Laboratory, Director Major Liston, I.M.S.
Sir J. J. School of Art, Bombay (Government), Principal Mr. Cecil Burns.
Victoria Technical Institute, Bombay, Principal Mr. T. Dawson.

Medical.

The Medical Department is in charge of the Surgeon-General and Sanitation of the Sanitary Commissioner, both members of the Indian Medical Service. Civil Surgeons stationed at each district headquarters are responsible for the medical work of the district, whilst sanitation is entrusted to one of the Deputy Sanitary Commissioners. Three large hospitals are maintained by the Government in Bombay, and well-equipped hospitals exist in all important up-country stations. Over four million persons including 67,000 in-patients are treated annually. The Presidency contains 7 Lunatic Asylums and 16 institutions for the treatment of Lepers. Vaccination is carried out by a staff under the direction of the Sanitary Commissioner. Sanitary work has received an immense stimulus from the large grants made by the Government of India out of the opium surpluses. The Budget is 27·38 lakhs.

Governor and President in Council.

His Excellency The Right Hon'ble Freeman Freeman-Thomas Baron Willingdon of Ratton, G.C.I.E. Took his seat 5th April 1913.

Personal Staff.

J. Crerar, I.C.S., J.P., *Private Secy.*

Captain C. K. Greenway, 26th King George's own light Cavalry.

Captain Rigby, R.A.M.C., *Surgeon to H. E. the Governor.*

Capt. A. K. McEwan, 225th Brigade, R.F.A., *Aide-de Camp.*

The Earl of Lathom, Captain Studd, Lt. G. A. Laverton, 2nd/4th Battalion, *Extra Aides-de-Camp.*

Captain Greenway, 26th Cavalry, *Offg. Comdt., H. E. the Governor's Body Guard.*

Subadar-Major Balkrishna Rao, 110th Mahrattas, *Indian Aide-de-Camp.*

Members of Council.

Sir. Mahadev Bhasker Chaubal, C.S.I., B.A., LL.B.

Mr. George Carmichael, C.S.I., I.C.S.

Mr. G. S. Curtis, C.S.I., I.C.S.

Additional Members of Council Elected.

Mr. D. V. Belvi, B.A.; LL.B. Elected by the Municipalities of the Southern Division.

Mr. G. M. Bhurgri, Bar.-at-Law. Elected by the Jaghirdars and Zamindars of Sind.

Mr. Sidhanath Dhonddeo Garud.

Sardar Syed Ali El Edroos. Elected by the Muhammadan Community of the Northern Division.

Mr. Chunilal V. Mehta, M.A., LL.B.

Shaikh G. H. Hidayatallah, LL.B. Elected by the District Local Boards of the Sind Division.

Sardar Shrinivas Coopooswami Mudaliar.

Mr. William Underwood Nicholas.

Mr. G. K. Parekh, B.A., LL.B. Elected by the Municipalities of the Northern Division.

Mr. V. J. Patel, Bar.-at-Law. Elected by the District Local Boards of the Northern Division.

Mr. Raghunath Purushottam Paranjpye.

Mr. Abdul Kadir *alias* Fakir Mohd. *valad* Ibrahim Khan.

Sardar Dulabawa Raisingji, Thakor of Kerwada. Elected by the Sardars of Gujarat.

Mr. Manmohandas Ramji. Elected by the Indian Commercial Community.

Mr. W. M. Rose Elected by the Bombay Chamber of Commerce.

Sir Dinshaw Maneckjee Petit, Bart.

Mr. Harchandrai Vishindas, B.A., LL.B.

Mr. Sheriff Devji Kanji.

Mr. Pandurang Anant Desai.

Mr. Ebrahim Haroon Jaffar.

Mr. Shridhar Balkrishna Upasani.

Nominated.

The Advocate-General (*ex-officio*).

Lt.-Col. James Jackson, M.B., I.M.S.

Mr. S. R. Arthur.

Mr. Salebhai Karimji Barodawala.

Mr. P. R. Cadell.

Mr. J. G. Covernton.

Dr. Cajetan Fernandes.

Dewan Bahadur Kashinath Ramchandra Godbole.

Mr. Muhammad Haji Bhai.

Mr. B. S. Kamat.

Mr. J. D. Jenkins.

Mr. G. F. Keatinge.

Mr. Henry Stavely Lawrence, I.C.S.

Mr. Lalubhai Samaldas Mehta, C.I.E.

Rao Bahadur V. S. Naik.

Khan Bahadur Pir Bakhsh *walad* Mian Muhammad.

Mr. Frederick G. Pratt, I.C.S.

Mr. Phiroze C. Sethna.

Rao Bahadur G. K. Sathe.

Mr. Purushotamdas Thakurdas.

Surgeon-General R. W. S. Lyons.

Rao Bahadur Tekchand Udhavdas.

SECRETARIES TO GOVERNMENT.

Political, Special and Judicial.—L. Robertson, I.C.S.

J. E. C. Jukes, I.C.S., *Dy. Secretary, Judicial and Political Departments* (Temporary).

Revenue, Financial and Separate.—The Hon'ble Mr. Patrick Robert Cadell, C.I.E., I.C.S.

General, Educational, Marine and Ecclesiastical.—George Arthur Thomas B.A., I.C.S.

Legal Department and Remembrancer of Legal Affairs.—George Douglas French, B.A., I.C.S.

Public Works Department.—Frederick St. John Gebbie (Ag.) and R. J. Kent (*Joint Secretary.*)

MISCELLANEOUS APPOINTMENTS (S. C.)

Advocate-General, The Hon. Mr. T. J. Strangman.

Inspector-General of Police, W. L. Berkeley Souter, C.I.E.

Director of Public Instruction, The Hon. Mr. J. G. Covernton, C.I.E.

Surgeon-General, The Hon. Surgeon-General R. W. S. Lyons, I.M.S.

Oriental Translator, Muhammad Kadir Shaikh.

Talukdari Settlement Officer, R. G. Gordon, I.C.S.

Settlement Commissioner and Director of Land Records, F. G. H. Anderson.

Director of Agriculture and Co-operative Societies, G. F. Keatinge, C.I.E.

Registrar of Co-operative Societies, R. B. Ewbank.

Municipal Commissioner, Bombay, P. W. Monie.

Sheriff, Mahomed Hajibhoy.

Vice-Chancellor, Bombay University, Chimanlal H. Setalvad.

Registrar, Bombay University, Fardunji Dastur.

Commissioner of Police, Bombay, F. A. M. Vincent, C.V.O.

Sanitary Commissioner, Lieut. Col. F. H. G. Hutchinson.

Accountant-General, Wilfred Alder, I.C.S.

Inspector-General of Prisons, Lt.-Col. J. Jackson, I.M.S.

Postmaster-General, H. S. H. Pilkington, M.V.O.

Commissioner of Customs, Salt, Opium and Excise, S. R. Arthur.

Collector of Customs, Bombay, F. W. Whitty.
Consulting Architect, G. W. Wittet.

GOVERNORS OF BOMBAY.

Sir Abraham Shipman 1662
Died on the island of Anjediva in October 1664
Humfrey Cooke 1665
Sir Gervase Lucas 1666
Died, 21st May, 1667.
Captain Henry Garey (*Officiating*) .. 1667
Sir George Oxenden 1668
Died in Surat, 14th July, 1669.
Gerald Aungier 1669
Died in Surat, 30th June, 1677.
Thomas Rolt 1677
Sir John Child, Bart. 1681
Bartholomew Harris 1690
Died in Surat, 10th May, 1694.
Daniel Annesley (*Officiating*) 1694
Sir John Gayer 1694
Sir Nicholas Waite.. 1704
William Aislabie 1708
Stephen Strutt (*Officiating*) 1715
Charles Boone 1715
William Phipps 1722
Robert Cowan 1729
Dismissed.
John Horne 1734
Stephen Law 1739
John Geekie (*Officiating*) 1742
William Wake 1742
Richard Bourchier.. 1750
Charles Crommelin.. 1760
Thomas Hodges 1767
Died, 23rd February, 1771.
William Hornby 1771
Rawson Hart Boddam 1784
Rawson Hart Boddam 1785
Andrew Ramsay (*Officiating*) 1788
Major-General William Medows 1788
Major-General Sir Robert Abercromby, K.C.B (*a*). 1790
George Dick (*Officiating*) 1792
John Griffith (*Officiating*).. 1795
Jonathan Duncan 1795
Died, 11th August, 1811.
George Brown (*Officiating*) 1811
Sir Evan Nepean, Bart. 1812
The Hon. Mountstuart Elphinstone 1819
Major-General Sir John Malcolm, G.C.B. 1827
Lieut.-General Sir Thomas Sidney Beckwith, K.C.B. 1830
Died, 15th January, 1831.
John Romer (*Officiating*) 1831
The Earl of Clare 1831
Sir Robert Grant, G.C.H. 1835
Died, 9th July, 1838.
James Farish (*Officiating*) 1838
Sir J. Rivett-Carnac, Bart. 1839
Sir William Hay Macnaghten, Bart. (*b*) . ..
George William Anderson (*Officiating*) .. 1841
Sir George Arthur, Bart., K.C.H. 1842
Lestock Robert Reid (*Officiating*) .. 1846
George Russell Clerk 1847
Viscount Falkland 1848
Lord Elphinstone. G.C.H., P.C. 1853
Sir George Russel Clerk, K.C.B. (2nd time) 1860
Sir Henry Bartle Edward Frere, K.C.B. 1862
The Right Hon. William Robert Seymour Vesey FitzGerald. 1867
Sir Philip Edmond Wodehouse, K.C.B. .. 1872
Sir Richard Temple, Bart., K.C.S.I. .. 1877
Lionel Robert Ashburner, C.S.I. (*Acting*).. 1880
The Right Hon. Sir James Fergusson, Bart., K.C.M.G. 1880
James Braithwaite Peile, C.S.I. (*Acting*).. 1885
Baron Reay 1885
Baron Harris 1890
Herbert Mills Birdwood, C.S.I. (*Acting*) .. 1895
Baron Sandhurst 1895
Baron Northcote, C.B. 1900
Sir James Monteath, K.C.S.I. (*Acting*) .. 1903
Baron Lamington, G.C.M.G., G.C.I.E. .. 1903
J. W. P. Muir-Mackenzie, C.S.I. (*Acting*). 1907
Sir George Sydenham Clarke, G.C.M.G., G.C.I.E. (*c*). 1907
Baron Willingdon, G.C.I.E. 1913

(*a*) Proceeded to Madras on duty in Aug., 1793, and then joined the Council of the Governor-General as Commander-in-Chief in India on the 28th Oct., 1793.

(*b*) Was appointed Governor of Bombay by the Honourable the Court of Directors on the 4th Aug., 1841, but, before he could take charge of his appointment, he was assassinated in Cabul on the 23rd Dec., 1841.

(*c*) Afterwards (by creation) Baron Sydenham

The Madras Presidency.

The Madras Presidency, officially the Presidency of Fort St. George, together with the Native States, occupies the whole southern portion of the peninsula, and, excluding the Native States, has an area of 141,075 square miles. It has on the east, on the Bay of Bengal, a coast-line of about 1,200 miles; on the west, on the Indian Ocean, a coast-line of about 450 miles. In all this extent of coast, however, there is not a single natural harbour of any importance; the ports, with the exception of Madras, which has an artificial harbour, are merely open roadsteads. A plateau, varying in height above sea-level from about 1,000 to about 3,000 ft., and stretching northwards from the Nilgiri Hills, occupies the central area of the Presidency; on either side are the Eastern and the Western Ghats, which meet in the Nilgiris. The height of the western mountain-chain has an important effect on the rainfall. Where the chain is high, the intercepted rain-clouds give a heavy fall, which may amount to 150 inches, on the seaward side, but comparatively little rain falls on the landward side of the range. Where the chain is low, rain-clouds are not checked in their westward course. In the central tableland and on the east coast the rainfall is small and the heat in summer excessive. The rivers, which flow from west to east, in their earlier course drain rather than irrigate the country; but the deltas of the Godaveri, Kistna and Cauvery are productive of fair crops even in time of drought and are the only portions of the east coast where agriculture is not dependent on a rainfall rarely exceeding 40 inches and apt to be untimely.

Population.

The population of the Presidency in 1911 was 41,402,000 and that of the Native States was 4,813,000. Hindus account for 89 per cent., Mahomedans for 6, Christians for 3, and Animists for 2. The vast majority of the population is of Dravidian race, and the principal Dravidian languages, Tamil and Telugu, are spoken by 15 and 14 million persons, respectively. Of every 1,000 people, 407 speak Tamil, 377 speak Telugu, 74 Malayalam, 37 Canarese and 23 Hindustani. It is remarkable that of the 41 millions of population all but quarter of a million belong to it by birth.

Agriculture.

About 68 per cent. of the population is occupied in Agriculture. About 49 per cent. having a direct interest as land-owners or tenants. About 86 per cent. of the cultivated acre is under food crops, the principal being rice (10·7 million acres), cholum or great millet (5·8 million acres), spiked millet (3·3 million acres) and ragi or millet (2·5 million acres) 24,023 acres are under wheat, 3,079 acres are under barley. About 3·2 million acres are under oil seeds, about 2·7 million acres are under cotton, 26,822 acres are under tea and 43,522 acres are under coffee. Irrigation is unnecessary on the West Coast but on the East about 30·5 per cent. of the cultivated area has ordinarily to be irrigated. Irrigation works include 28,896 tanks, 6,164 river channels, 6,114 spring channels, 1,391 anicuts, 391,659 ayakat wells and 215,736 supplemental wells. The recent progress of the application of machinery to irrigation on a small scale has been remarkable.

Industries.

Comparative poverty in readily exploitable mineral wealth and the difficulty of coa supply prohibit very large industrial development in the Presidency, but excellent work, both in reviving decadent industries and testing new ones, has been done under Government auspices. The only indigenous art employing a considerable number of workers is weaving. There is no system of regular registration in vogue, and the figures given can be regarded only as approximate, but returns show a total of 1,231 factories driven by engines of an aggregate H. P. of 33,417. Of these factories 179 are concerned with cotton.

Trade.

The grand total of sea-borne trade of the Madras Presidency in 1914-15 was Rs. 58,15,93,000, a decrease of some 16 per cent. owing to war conditions. It would be misleading to cite the years figures in detail since they were abnormal; the average for the 5 years ending 1910-11 was Rs. 45,01,10,000. The following items in the 1914-15 returns may be mentioned:—Exports decreased by 16 per cent. in Indian produce and by 26 per cent. in foreign goods re-exported. Imports decreased by 23 per cent. under the heading merchandise. In the last normal year, about 63 per cent. of the trade of the Presidency was with the British Empire and about 42 per cent. with the United Kingdom. The port of Madras accounted for 41 per cent. of the whole sea-borne trade of the Presidency.

Education.

The literate population numbers 3,130,000 in every 1,000; 138 men and 13 women can read and write. Of every 1,000 persons, 6 are literate in English, but the total number of women literate in English is only 4,000. There were in 1913-1914, twenty-nine Arts Colleges, five Oriental Colleges, three Professional Colleges, 364 Secondary Schools and 26,018 Elementary Schools for males; for females there were two Arts Colleges, 69 Secondary Schools and 1,443 Elementary Schools. In addition to these, all of which were public institutions; there were 368 advanced and 4,222 elementary private institutions for male scholars and 122 for females. The total number of scholars in educational institutions of all kinds was 1,469,945 including 7,094 students in Arts and Oriental Colleges, 986 in Professional Colleges, 128,157 in Secondary Schools and 1,200,249 in Elementary schools. The Madras University produces each year about 600 graduates in Arts.

Government.

The Madras Presidency is governed on a system generally similar to that obtaining in Bombay and Bengal. At the head is the Governor usually selected from the ranks of British public men or of ex-Governors of Colonies; with the Governor is associated an Executive Council of three members, two o

whom must have served for ten years under the Crown in India, while the third, of whom official experience is not required, is in practice, but not of necessity, an Indian. Madras administration differs, however, in some important respects from that of other major Provinces. There is no intermediate local authority between the Collector of the District and the authorities at headquarters, the Commissioner being unknown in Madras. Part of the power which would be reserved elsewhere for the Commissioner is given to the Collector, whose status is rather higher in Madras than elsewhere, and part is exercised by the Board of Revenue. Each member of the Board of Revenue is in fact a Commissioner for specific subjects throughout the Presidency. This conduces to administration by specialists and to the maintenance of equal progress in specific matters in every part of the Presidency, but it leaves the Government without an official who can judge of the general administration of large parts of the country. For these and other reasons the Decentralisation Commission recommended that a system of Commissionerships be introduced in Madras.

Finance.

According to the revised estimates for 1915-16 the Presidency's financial position was as follows in lakhs of rupees:—Opening balance, Rs. 110·16; receipts, Rs. 763·96; expenditure Rs. 771·92; the deficit being Rs. 7·96.

Governor and President-in-Council.

His Excellency the Rt. Hon. Baron Pentland, G.C.I.E., P.C. *Took his seat 30th October*, 1912.

Personal Staff.

Private Secy., T. E. Moir, I.C.S.

Military Secy., Lieut.-Col. R. G. Munn.

Aides-de-Camp, Capt. Lionel Meredith Peet, Lt. D. L. G. Carleton Smith, Commander A. S. Balfour.

Extra Aide-de-Camp, Lt., John Eaton Monins.

Indian Aides-de-Camp, Risaldar Major Malik Sher Bahadur, Hon. Capt. Shaik Ismail Sirdar Bahadur.

Surgeon, Major Frederick Fenn Elwes, C.I.E., I.M.S.

Commandant of Body Guard, Captain Wigram Seymour Elliot Money. (On Active Service.)

Temporary Commandant, Captain G. B. Llewhellin.

Members of Council.

Divan Bahadur P. Rajagopala Achariyar, C.I.E.

Mr. Herbert Fancis Webb Gillman, C.S.I., I.C.S.

Sir A. G. Cardew, K.C.S.I., I.C.S.

Additional Members of Council Elected.

Tiruvengada Ranga Achariyar.

Rev. G. Pittendrigh.

A. Suryanarayana Rao Pantulu.

M. Ramchandra Rao Pantulu.

A. Subba Krishna Rao Pantulu.

Pulamati Siva Rao.

A. Subbarayulu Reddiyar.

B. V. Aiyar Narasimha Aiyar.

K. Sadasiva Bhat.

V. K. Aiyangar Ramanujachariyar.

Krishnaswami Rama Aiyangar.

K. R. Venkata Krishna Rao Pantulu.

B. Raja Rajeswara Setupathi, Raja of Ramnad.

Bhupatiraju Venkatapati Raju.

K. Chidambaranatha Mudaliyar.

K. K. Raman Kavalappara Muppil Nayar.

Yaqub Hasan, Saheb Bahadur.

Ahmed Tambi Ghulam Muhiuddin Marakkayar.

C. H. Higginbotham.

Gordon Fraser.

E. F. Barber.

Nominated.

Malcolm Edward Couchman.

L. Davidson, C.S.I.

L. E. Buckley.

J. H. Stone.

R. B. Clegg.

S. B. Murray.

Colonel William Montague Ellis, R.E.

Diwan Bahadur Raghunatha Rao Ramchandra Rao.

Surg.-Gen. W. B. Bannerman, C.S.I., M.D., I.M.S.

Arthur Rowland Knapp.

Khan Bahadur Muhammad Aziz-ud-din Hussain.

S. Srinivasa Ayyangar.

Sir Ghulam Muhamad Ali.

The Most Rev. John Aelen.

T. Richmond.

Sir F. J. E. Spring, K.C.I.E.

Rao Bahadur S. C. Ramanathan Chettiyar Muthayya Chetti Annamalai Chettiyar.

Rao Bahadur K. R. Suryanarayanamurti Nayudu Garu.

Sri Sobha Chandra Singh Deo.

Charles George Todhunter.

SECRETARIES TO GOVERNMENT.

Chief Secretary to Government, A. Butterworth, I.C.S. (on leave).

Revenue, L. Davidson, C.S.I., I.C.S.: *Acting* Arthur Rowland Knapp.

Local and Municipal, Education and Legislative, R. A. Graham, I.C.S.

Public Works (General), Col. W. M. Ellis, R.E.

Joint Secretary, S. B. Murray.

BOARD OF REVENUE.

First Member, R. B. Clegg.
Second Member, N. S. Brodie, M.A.
Third Member, L. E. Buckley.
Fourth Member, James Perch Bedford.

MISCELLANEOUS APPOINTMENTS.

Commissioner of Revenue Settlement, etc., L. E. Buckley, I.C.S.
Revenue Survey Department, Director, D. G. Hatchell.
Director of Public Instruction, J. H. Stone, C.I.E. (*Ag.*)
Vice-Chancellor of Madras University, Justice Sir John Wallis.
Registrar of Madras Univeristy, F. Dewsbury.

Inspector-General of Police, P. L. Moore, C.I.E., I.C.S.

Surgeon-General, Surgeon-General W. B. Bannerman, C.S.I.

Accountant-General, A. Newmarch.

Inspector-General of Prisons, Col. R. J. Macnamara, I.M.S.

Postmaster-General, John Monteath.

Officiating Collector of Customs, Percy Eccles., B.A., I.C.S.

Commissioner of Salt, Abkari, etc. Mr. C. G. Todhunter, I.C.S.

Inspector-General of Registration, C. R. M. Schmidt.

President, Madras Corporation, P. L. Moore, C.I.E.

Director of the Kodaikanal and Madras Observatories, J. Evershed.

Supdt., Govt. Central Museum, and Principal Librarian, Connemara Public Library, J. R. Henderson.

Piscicultural Expert, H. C. Wilson.

Persian and Hindustani Translator to Government, Major A. R. Nethersole, I.A.

Registrar of Co-operative Credit Societies, L. D. Swamikannu Pillai, Diwan Bahadur.

Director of Agriculture, D .T. Chadwick, I.C.S.

Consulting Architect, W. H. Nicholls.

Presidents and Governors of Fort St. George in Madras.

William Gyfford	1684
Elihu Yale	1687
Nathaniel Higginson	1692
Thomas Pitt	1698
Gulston Addison	1709
Died at Madras, 17 Oct., 1709.	
Edmund Montague (*Acting*)	1709
William Fraser (*Acting*)	1709
Edward Harrison	1710
Joseph Collet	1711
Francis Hastings (*Acting*)	1727
Nathaniel Elwick	1727
James Macrae	1725
George Morton Pitt	1730
Richard Benyon	1735
Nicholas Morse	1744
John Hinde	..
Charles Floyer	1747
Thomas Saunders	1750
George Pigot	1755
Robert Palk	1763
Charles Bourchier	1767
Josias DuPre	1770
Alexander Wynch	1773
Lord Pigot (Suspended)	1775
George Stratton	1776
John Whitehill (*Acting*)	1777
Sir Thomas Rumbold, Bart.	1778
John Whitehill (*Acting*)	1780
Charles Smith (*Acting*)	1780
Lord Macartney, K.B.	1781

Governors of Madras.

Lord Macartney, K.B.	1785
Alexander Davidson (*Acting*)	1785
Major-General Sir Archibald Campbell, K.B.	1786
John Hollond (*Acting*)	1789
Edward J. Hollond (*Acting*)	1790
Major-General William Medows	1790
Sir Charles Oakeley, Bart.	1792
Lord Hobart	1794
Major-General George Harris (*Acting*)	1798
Lord Clive	1799
Lord William Cavendish Bentinck	1803
William Petrie (*Acting*)	1807
Sir George Hilaro Barlow, Bart., K.B.	1807
Lieut.-General the Hon. John Abercromby.	1813
The Right Hon. Hugh Elliot	1814
Major-General Sir Thomas Munro, Bart., K.C.B.	1820
Died, 6 July, 1827.	
Henry Sullivan Grœme (*Acting*)	1827
Stephen Rumbold Lushington	1827
Lieut.-General Sir Frederick Adam, K.C.B.	1832
George Edward Russell (*Acting*)	1837
Lord Elphinstone, G.C.H., P.C.	1837
Lieut.-General the Marquess of Tweeddale, K.T., C.B.	1842
Henry Dickinson (*Acting*)	1848
Major-General the Right Hon. Sir Henry Pottinger, Bart., G.C.B.	1848
Daniel Eliott (*Acting*)	1854
Lord Harris	1854
Sir Charles Edward Trevelyan, K.C.B.	1859
William Ambrose Morehead (*Acting*)	1860
Sir Henry George Ward, G.C.M.G.	1860
Died at Madras, 2 August, 1860.	
William Ambrose Morehead (*Acting*)	1860
Sir William Thomas Denison, K.C.B.	1861
Acting Viceroy, 1863 to 1864.	
Edward Maltby (*Acting*)	1863
Lord Napier of Merchistoun, K.T. (*a*)	1866
Acting Viceroy.	
Alexander John Arbuthnot, C.S.I. (*Acting*)	1872
Lord Hobart	1872
Died at Madras, 27 April, 1875.	
William Rose Robinson, C.S.I. (*Acting*)	1875
The Duke of Buckingham and Chandos	1875
The Right Hon. W. P. Adam	1880
Died at Ootacamund, 24 May, 1881.	
William Hudleston (*Acting*)	1881
The Right Hon. M. E. Grant Duff	1881
The Right Hon. Robert Bourke, P.C.	1886
Lord Connemara, 12 May, 1887 (by creation).	
John Henry Garstin, C.S.I. (*Acting*)	1890
Baron Wenlock	1891
Sir Arthur Elibank Havelock, G.C.M.G.	1896
Baron Ampthill	1900
Acting Viceroy and Governor-General, 1904.	
James Thomson, C.S.I. (*Acting*)	1904
Gabriel Stokes, C.S.I. *Acting*)	1906
Hon. Sir Arthur Lawley, K.C.M.G., G.C.I.E.	1906
Sir Thomas David Gibson-Carmichael, Bart., K.C.M.G., G.C.I.E. (*b*)	1911
Became Governor of Bengal, 1 April,	1912
Sir Murray Hammick, K.C.S.I., C.I.E. (*Acting*).	1912
Right Hon. Baron Pentland, P.C., G.C.I.E.	1912

(*a*) Afterwards (by creation) Baron Napier of Ettrick.

(*b*) Afterwards (by creation) Baron Carmichael of Skirling.

The Bengal Presidency.

The Presidency of Bengal, as constituted on the 1st April 1912, comprises the Burdwan and Presidency divisions and the district of Darjeeling, which were formerly administered by the Lieutenant-Governor of Bengal; and the Rajshahi, Dacca and Chittagong divisions which by the partition of the old Province had been placed under the administration of the Lieutenant-Governor of Eastern Bengal and Assam. The area of the Presidency is 84,092 square miles, and it possesses a population of 46,305,642 persons; included within this area are the two Native States of Cooch Behar and Hill Tippera, which are under the general supervision of the Government of Bengal. The area of the British territory is 78,699 square miles. Bengal comprises the lower valleys and deltas of the Ganges and Brahmaputra, and in the main consists of a great alluvial plain intersected in its southern portion by innumerable waterways. In the north are the Himalayan mountain and submontane tracts of Darjeeling and Jalpaiguri, and on the south-east the hills in Hill Tippera and Chittagong, while on the west the Chota Nagpur plateau is continued by an undulating tract running through the western portions of Midnapur, Bankura, Burdwan and Birbhum. The general range of the country however is very low, and a great fertile plain extends southward from Jalpaiguri to the forests and swamps known as the Sunderbans, which lie between the area of cultivation and the Bay of Bengal.

The People.

Of the inhabitants of the Presidency 24,237,238 or 52·4 per cent. are Mahomedans and 20,945,379 Hindus. These two major religions embrace all, but 2·4 per cent. of the population. Christians, Buddhists, and Animists combined number a little over 1,100,000.

Bengali is spoken by ninety-two per cent. of the population of the Presidency and Hindi and Urdu by four per cent. The Oriya-speaking people number nearly 800,000 and Naipali is the tongue of 89,000 persons principally residents in the Darjeeling and Jalpaiguri districts. The great majority of the speakers of the Munda languages are Santals in West and North Bengal.

Industries.

According to the returns of the Census of 1911 nearly 35½ million or three-fourths of the population derive their support from pasture and agriculture, and of these nearly 30 millions are cultivators, and nearly 3½ millions farm servants and field labourers. The area under jute in 1917 is estimated at 2,376,247 acres against 2,351,821 in 1916. The weather was favourable for the crop in its early stages. The crop may be described as a very good one, on the whole, in most of the Eastern Bengal districts, moderate only in Northern Bengal and good in Western Bengal. Bengal is the most important rice-producing area in Northern India, and it is computed that 85 per cent. of the cultivated area of the Presidency is devoted to its production. Other crops include barley, wheat, pulses and oil-seeds, the area devoted to the last named being 1,655,400 acres. Sugar is produced both from the sugar cane and from the date-palm, and tobacco is grown for local consumption in nearly every district of Bengal. The area under tea in 1916-17 was 165,800 acres. There was 301 plantations employing a daily average of 106,305 permanent and 26,209 temporary hands.

Manufacture and Trade.

The main industries in this part of India in addition to the agricultural industry are the jute mill industry, the tea industry (largely an Assam industry) and Coal mining. The Jute Mills in and around Calcutta constitute the principal manufacturing industry of the Presidency. During the first nine months of the year 1916-17 the industry enjoyed unparalleled prosperity but in the last three months of that year the non-renewal of Government orders and the great scarcity of tonnage coupled with financial difficulties in exchange caused a set back, and finally led to an agreement to work short time as from the 1st April, 1917. There were 71 mills belonging to 45 companies (including four private concerns) at work throughout the year with 39,404 looms and 817,759 spindles. The average number of persons employed daily was 260, 199. There were no difficulties as regards the supply of labour. Four new mills have come into existence during the year but only one of them is working and that with only 250 looms at present. The total profits (after deduction of interest on debentures but subject to allowances for depreciation) made by 41 Jute Mill Companies in Bengal (owing 67 Mills) at the close of the year 1916 constituted a record, namely, Rs. 923 lakhs. The corresponding figures for 1914 and 1915 were Rs. 1,23 and Rs. 6,99 lakhs respectively. The value of the exports of Raw Jute during 1916-17 increased by nearly 47 lakhs to Rs. 15,35 lakhs. The quantity exported, however was less than in the preceding year by 65,936 tons. The Jute cess benefitted the Calcutta Improvement Trust to the extent of Rs. 9,91 lakhs, while Rs. 10,13 lakhs were collected in the preceding year. The exports of raw and manufactured Jute represented 62 per cent. of Calcutta's exports during 1916-17 and jute manufactures were, it may be noted, India's premier export in that year. Other principal industries are cotton twist and yarn, silk yarn and cloth, handmade cloth, sugar, molasses and paper. Fourteen cotton mills were at work during 1916-17 employing daily on an average 9,806 persons. The silk weaving industry continues to decline. There was only one silk mill working during 1916 which employed 83 hands. The manufacture of tea is carried on an extensive scale in Darjeeling and Jalpaiguri. The capital employed in the industry in India amounts to about Rs. 35 crores and the daily average labour force to 727,000. In 1916 the number of coal mines worked in Bengal was 169. The total output for Bengal was 4,992,000 tons against 4,975,000 tons raised in 1915, while the output of all the mines in Bengal, Bihar and Orissa, and Assam amounted to 16,047,000 tons. The capital in the industry employed in these provinces is approximately Rs. 6,44 lakhs. The daily average of persons employed in the coal mines in Bengal was 43,040 and in Bengal, Bihar and Orissa, and Assam 137,907. Three paper mills produced paper valued at Rs. 1,08 lakhs in 1916, the highest on record.

In 1916-17 the foreign seaborne trade of Bengal amounted to Rs. 167,59 crores of

which Rs. 70,06 crores represented imports and Rs. 97·52 crores exports. Of the total foreign and coasting trade of Bengal, 95 per cent. was the share of Calcutta. The six chief exports from Bengal are in order of importance; jute (raw and manufactures,) tea, hides and skins (raw), lac, opium, and seeds and the six leading imports are cotton goods, sugar, metals, machinery and mill-work, oils, and salt.

Administration.

The present form of Government dates from the 1st of April 1912, when the administrative changes announced by the King-Emperor at Delhi in December 1911 came into operation. A Governor was then substituted for a Lieutenant-Governor, who had previously been at the head of the Province, and Lord Carmichael of Skirling assumed charge of the office. He was succeeded by the Earl of Ronaldshay in March 1917. The Governor is assisted by an Executive Council, two of whom are at present members of the Indian Civil Service and the third an Indian. The Civil Secretariat consist of the Chief Secretary, who is in charge of the Political Appointment and Judicial Department, the Revenue Secretary, the Financial Secretary, who also deals with Commercial questions, the General Secretary who deals with questions of Local Self Government and Education and the Legislative Secretary, five Under-Secretaries and one Assistant Secretary. The Government divides its time between Calcutta, Darjeeling and Dacca.

Bengal is administered by five Commissioners under the Governor in Council, the divisions being those of the Presidency, Burdwan, Rajshahi, Dacca and Chittagong. The unit of administration is the District Magistrate and Collector. As Collector he supervises the ingathering of the revenue and is the head of all the Departments connected with it, while as District Magistrate he is responsible for the administration of Criminal justice in the district. The immediate superior of the District Magistrate is the Divisional Commissioner. Commissioners are the channels of communication between the local officers and the Government. In certain revenue matters they are, in their turn, subject to the Board of Revenue in Calcutta; in other matters they are under the direct control of Government.

Justice.

The administration of justice is entrusted to the High Court of Calcutta which consists of the Chief Justice who is a barrister and 13 puisne judges who are barristers, civilians or vakils. Below the High Court are the District and Additional Judges, the Small Cause Court and Subordinate Judges and the Munsifs. Of these officers the District and Additional Judges and a certain number of subordinate judges are also endowed with the power of a Criminal Court while the remainder have jurisdiction in Civil matters only. Criminal justice is administered by the High Court, the Courts of Session and the courts of the various classes of magistrates. On its appellate side the High Court disposes of appeals from the order of a Court of Session, and it also confirms, modifies or annuls sentences of death passed by Sessions Courts. Calcutta has four Presidency Magistrates, two Municipal Magistrates and also a number of Honorary Magistrates and it possesses a Court of Small Causes with six judges who dispose of cases of the class that are usually heard in County Courts in England.

Local Self Government.

By Bengal Act III of 1884 which regulates municipal bodies in the interior and its subsequent amendments the powers of Commissioners of municipalities have been increased, and the elective franchise has been extended. Municipal expenditure now comprises a large number of objects, including veterinary institutions and the training and employment of Health Officers and Sanitary Inspectors and female medical practitioners. The Commissioners also have large powers in regard to the water-supply and the regulation of buildings. In Calcutta Act (III) of 1899 created three co-ordinate municipal authorities, the Corporation, the General Committee, and the Chairman. The total number of Commissioners is fifty, of whom 25 are elected, and the remainder appointed by Government and by commercial bodies. In order to improve the insanitary and congested areas of the city, the Calcutta Improvement Trust has been created with extensive powers. In the mofussil, District and Local Boards exercise considerable powers, with regard to Public Works, Education and Medical relief and Union Committees have been formed which deal for the most part with the control of village roads, sanitation and water-supply.

Finance.

As in other Provinces, the revenue is divided between the Local Government and the Government of India. The Budget for 1917-18 showed an opening balance of Rs. 3·27 crores, estimated revenue amounted to Rs. 6·66 crores and expenditure aggregated Rs. 6·77 crores. Of the closing balance of Rs. 316 lakhs, Rs. 246 lakhs was earmarked for various objects.

Public Works.

The Public Works Department is at present under the charge of a Chief Engineer and the Irrigation Department under that of a temporary Chief Engineer whose appointment has been sanctioned for five years. The redistribution of territories on 1st April 1912 caused considerable changes in this Department and almost all the Irrigation works in the old province of Bengal as well as two out of the three Canal Revenue Divisions went to the new province of Bihar and Orissa. There was also a considerable reduction in the staff and in the number of P. W. Circles and Divisions. Public buildings are erected by the Department which constructs roads and carries out miscellaneous public improvements. Irrigation Works in Bengal are under the charge of the Irrigation Department which deals with the numerous embankments and drainage works as well as waterways that intersect the province.

The Marine Department which deals with all questions connected with the Bengal Pilot Service, Merchant Shipping and with the importation, possession, &c., of petroleum is also under the charge of the Irrigation Secretary.

Police.

The Bengal Police force comprises the Military Police, the District Police, the Railway Police, and the River Police. The District Police are under the control of the Inspector-General of Police, who is usually a Covenanted Civilian, although the office is open to gazetted members of the Force. Under him are Deputy Inspectors-General, for the Dacca Range, the Rajshahi

range, the Presidency range, the Burdwan range and the new Bakarganj range and also two Deputy Inspectors-General, one in charge of the C. I. D., and the other in charge of the Intelligence Branch of the C. I. D. Each district is in charge of a Superintendent, and several of the more important districts have an Additional Superintendent. The Railway Police is divided into three distinct charges each under a Superintendent. The River Police is also under a Superintendent. The cadre comprises Assistant Superintendents, Deputy Superintendents, Inspectors, Sub-Inspectors, Sergeants, head constables and constables. There is also a Village Police, composed of daffadars, and chowkidars, who receive a monthly salary which is collected from the villages by the Panchayat. In the Madaripur Sub-Division however the daffadars who are whole-time servants are paid partly by Government and partly by the Panchayat. The Calcutta City police is a separate force maintained by Government under a Commissioner who is responsible direct to Government. The Commissioner has under him Deputy Commissioners, Assistant Commissioners, Inspectors, Sub-Inspectors, head constables and constables, and a reserve force of about 120 European sergeants. A school for the training of recruits for the Calcutta Police force has been established at Calcutta. There is a training college and school at Sarda, in the district of Rajshahi where newly appointed gazetted officers, Sub-Inspectors and constables learn their duties. There are three other schools at Dacca, Berhampore and Rampur Boalia for the training of constables. The annual cost of the Police is over Rs.110lakhs.

Medical.

The head of the Medical Department is the Surgeon General with the Government of Bengal, and Sanitation is in charge of the Sanitary Commissioner, both these officials being members of the Indian Medical Service. There is also a Sanitary Engineer for the Presidency. In the districts the Civil Surgeons are responsible for medical work. There are 22 hospitals in Calcutta, 10 of which are supported by the Government and 408,927 persons are treated at these institutions annually, of whom nearly 31,507 are in-patients. In the mofussil districts there are several hundred hospitals and dispensaries; the number of patients treated in them during 1916 was 5,746,077 including 60,803 in-patients.

Education.

In the Presidency of Bengal education is imparted partly through Government agency and partly through private bodies, assisted in large measure by Government grants-in-aid. Government maintains three Arts Colleges in Calcutta (of which one is a college for women and one the Sanskrit College), one at Hughli, one at Krishnagar, one at Dacca, one at Rajshahi and one at Chittagong. It also maintains two training colleges, one at Calcutta and one at Dacca, for teachers who teach in secondary schools through the medium of English and 5 normal schools, one in each division, for the training of teachers in secondary schools through the medium of the vernacular; also an engineering college at Sibpur and an engineering school at Dacca, a medical college, a veterinary college, a school of art and a commercial school in Calcutta and a weaving school at Serampore. It also provides at the headquarters of all districts, except Burdwan and Midnapore, and also at certain other mofussil centres, High English schools for the education of boys, while to some Government Arts Colleges high schools are attached. In Calcutta there are five high schools for boys, two of which are attached to Presidency College and one to the Sanskrit College. Government high schools for girls exist only in the headquarters stations of Calcutta, Dacca, Mymensingh and Chittagong. The other secondary schools, with the exception of a few middle schools managed either by Government or by boards, are under private control. The administration of primary education in all areas, which are not under municipalities, rests with the district boards, large grants being given from provincial revenues to the boards, which contribute only slightly from their own funds. Only in backward localities are such schools either entirely managed, or directly aided, by Government. Apart from the institutions referred to above, 115 institutions called Guru Training Schools are maintained by the Department for the training of vernacular teachers. For the education of Mahomedans, there are senior madrasas at Calcutta, Dacca, Chittagong and Hughli, which are managed by Government. There are also certain Government institutions for technical and industrial education. A large proportion of educational work of every stage is under the control of various missionary bodies, which are assisted by Government grants-in-aid.

The municipalities are required to expend a certain proportion of their ordinary income on education. They are mainly responsible for primary education within their jurisdiction, but schools in these areas are eligible also for grants from Government. These bodies maintain a second grade Arts College and a high school at Midnapore, a high school at Burdwan, a high school at Baranagore and a high school at Chittagong.

There are now in the Presidency:—

Arts Colleges	33	Secondary Schools	2,755
Law ,,	9	Primary Schools	41,966
Medical Colleges	2	Special ,,	1,332
Engineering College	1	Private Institutions	2,269
Training Colleges	5		

with 19,18,434 pupils in all.

The Government Educational Budget allotment for the province for 1914-1915 is Rs. 1,45,43,000. Of this a large proportion represents the grants recently allotted by the Government of India.

The Department is administered by a Director of Public Instruction, assisted by an Assistant Director and an Assistant Director for Muhammadan Education and a special officer in connection with Technical and Industrial Education. Each division is in charge of a Divisional Inspector assisted by a certain number of Additional and Assistant Inspectors according to the requirements of the several divisions. Similarly the administrative charge of the primary education of each district is in the hands of a Deputy Inspector assisted by Additional Deputy and Sub-Inspectors of

Schools, the latter class officers being in some instances helped by officers of humbler status called Assistant Sub-Inspectors and Inspecting Pandits and Maulvis. Higher education is controlled by the University (Calcutta) established in 1857, administered by the Chancellor (the Governor-General and Viceroy of India), the Rector (the Governor of Bengal), the Vice-Chancellor (appointed by the Government of India, usually for two years at a time), and 110 fellows, of whom 10 are ex-officio, 10 are elected by registered Graduates, 10 by the Faculties and the remainder 80 are nominated by the Chancellor. The University maintains a Law College, called the University Law College, Calcutta. The University is mainly an examining body, but it has now made itself responsible for the actual teaching of students, for which purpose it employs an agency which is quite distinct from the staffs of the affiliated colleges.

The following University Professorships have been founded:—(1) Prasanna Kumar Tagore Law Professorship, (2) Minto Professorship of Economics, (3) George V. Professorship of Mental and Moral Science (4) Hardinge Professorship of Higher Mathematics, (5) Carmichael Professorship of Ancient Indian History and Culture, (6) Palit Professorships of Chemistry and Physics, (7) Sir Rash Behary Ghose Professorship of Applied Mathematics, Physics, Chemistry and Botany, and (8) Two Professorships of English.

The principal educational institutions are:—

GOVERNMENT ARTS COLLEGES.

Presidency College, Calcutta, Principal, W. C. Wordsworth.
Dacca College, Principal, W. A. J. Archbold.
Rajshahi College, Principal, Rai K. K. Banerji Bahadur.
Chittagong College, Principal, J. R. Barrow.
Sanskrit College, Principal, Dr. S. C. Acharya.
Hughli College, Principal, J. M. Bottomley.
Krishnagar College, Principal, R. N. Gilchrist.
Bethune College, Calcutta, Principal, Miss A. L. Janau.

PRIVATE ARTS COLLEGES.

Aided.

Scottish Churches College, Calcutta, Principal, Rev. J. Watt.
St. Xavier's College, Calcutta, Rector, Rev. Father Crohan.
Jagannath College, Dacca, Principal, Rai L. M. Chatterji Bahadur.
Brajamohan College, Barisal, Principal, N. L. Mookherjee.
Anandamohan College, Mymensingh, Principal, Dr. J. Ghosh.
Victoria College, Comilla, Principal, Satyendranath Basu.
Wesleyan College, Bankura, Principal, Rev. J. Mitchell.
Victoria College, Narail, Principal, Gopalchandra Maitra.
Hindu Academy, Daulatpur, Principal, Kamakhyacharan Nag.
Serampore College, Principal, The Rev. Dr. George Howell.
St. Paul's Cathedral Mission College, Calcutta, Principal, The Rev. W. E. S. Holland.
Edward College, Pabna, Principal, R. Bose.
Diocesan College, Calcutta, Lady Principal, Sister Mary Victoria, C.T.S.B.
City College, Calcutta, Principal, Heramba Chandra Maitra.
Ripon College, Calcutta, Principal, Ramendra Sundar Trevedi.
Bangabasi College, Calcutta, Principal, G.C. Bose.
Metropolitan Institution, Calcutta, Principal, Saradaranjan Roy.
Central College, Calcutta, Principal, Khudiram Bose.
Krishna Chandra College, Hetampur, Principal, Dhurumdas Dutt.
Burdwan Raj College, Principal, Umacharan Bandopadhayaya.
Uttarpara College, Principal, Jogendra Nath Mitra.
Krishnath College, Berhampore, Principal, S. Banerji (offg.)
Loreto House, Calcutta, Lady Principal, The Rev. Mother Mary Borgia, I.B.V.M.

MUNICIPAL.

Midnapore College, Principal, Jogendra Nath Hazra.

COLLEGES FOR PROFESSIONAL TRAINING.

Engineering—Government.

Civil Engineering College, Sibpur, Principal, B. Heaton.

Teaching—Government.

David Hare Training College, Principal, W. E. Griffith, (on deputation). Babu Chinta Haran Chakravarti (offg.)
Dacca Training College, Principal, E. E. Biss (on deputation). Mr. H. A. Stark (offg.)

Aided.

L. M. S. Training College, Bhowanipore (Calcutta), Rev. A. Sims.
Diocesan College, Calcutta, Lady Principal, Sister Mary Victoria, O.I.I.B.

Medicine—Government.

Medical College, Calcutta, Principal, Lt.-Col. J. T. Calvert.

Law.

University Law College, Calcutta, Principal, Dr. Satis Chandra Bagchi.
The Law Department, attached to the Dacca College, Vice-Principal, Waresh Chandra Sen Gupta.
The Law Department, attached to the Ripon College, Calcutta, Principal, Jankinath Bhattacharji.

There are also Pleadership classes attached to the Government Colleges at Dacca, Rajshahi, Hoogly, Chittagong and Krishnagar and in the unaided college at Berhampore, the Ripon College and the Metropolitan Institution, Calcutta, and the Municipal College at Midnapore.

Administration.

GOVERNOR AND PRESIDENT IN COUNCIL.

His Excellency The Rt. Hon. Lawrence John Lumley Dundas, Earl of Ronaldshay, G.C.I.E. Took his seat, 26th March 1917.

PERSONAL STAFF.

Private Secretary. W. R. Gourlay.
Military Secretary, Capt. Henry George Vaux.
Surgeon, Capt. J. D. Sandes, I.M.S.
Aides-de-Camp, The Hon. Captain C. D. Finch-Knightley, Lt. E. K. Stephenson.
Honorary Aides-de-Camp, Col. C. M. Pearce, V.D. Commander E. A. Constable, R.N.; Lt.-Col. R. Glen, V.D.; Lt.-Col. G. F. Stoddart; Lt.-Col. R. S. Hawkins, V.D.; Commander Duncan Frederick Vines, R. I. M.; Lt.-Col. D. A. Tyrie, V.D.
Extra Aide-de-Camp, 2nd Lt. D. Balfour, Lothian and Border Horse.

Indian Aide-de-Camp, Risaldar Faiz Muhammad Khan.
Commander of Body Guard, Major O. F. Smith.

BENGAL EXECUTIVE COUNCIL.

N. D. Beatson Bell. Took his seat, November 1914.
Sir Henry Wheeler, K.C.I.E., C.S.I., I.C.S., 9th April 1917.
Sir Satyendra Prasanna Sinha, Kt., 8th June 1917.

LEGISLATIVE COUNCIL OF BENGAL.

Councillors, Ex-Officio.

John Ghest Cumming.
C. J. Stevenson Moore.
Binod Chandra Mitra.

Nominated, Officials.

Mr. James Donald.
„ J. H. Kerr, C.I.E.
„ C. H. Bompas.
Surgeon-General W. R. Edwards, C.B., I.M.S.
Mr. E. B. H. Panton.
„ W. W. Hornell.
Rai Priya Nath Mukharji Bahadur.
Mr. Samuel Waller Goode, I.C.S.
„ F. A. A. Cowley.

Nominated, Non-officials.

Nawab Sir Asif Qudr Saiyid Wasif Ali Mirza, Khan Bahadur, K.C.V.O. of Murshidabad.
Sir Rajendra Nath Mukharji, K.C.I.E.
Mr. James Mackenzie.
Dr. Nilratan Sarkar.
Raja Hrishikesh Laha, C.I.E.
Lt.-Col. R. Glen.
Mr. W. H. Heton Arden Wood, C.I.E.
„ Aminur Rahman.

Elected.

Mr. Provash Chandra Mitter.
Sir Bijay Chand Mahtab.
Kumar Shib Shekhareswar Ray.
Babu Brajendra Kishor Ray Chaudhuri.
Babu Arun Chandra Singh.
Dr. Deba Prosad Sarbadhikari.
Rai Radhacharan Pal Bahadur.
Mr. F. W. Carter, C.I.E.
„ Archibald Birkmyre.
„ Rai Debendra Chandra Ghosh Bahadur.
„ Ernest Bruce Eden.
„ E. A. Martin.
„ H. R. A. Irwin.
Dr. Abdulla-al-Mamum, Suhrawardy.
Maulvi Abdul Kasem.
Maulvi Abdul Kasem Fazl-ul-Haq.
Mr. Ashrafali Khan Chaudhuri.
„ Abdul Rasul.
Babu Bhabendra Chandra Ray.
Rai Mahendra Chandra Mitra.
Mr. Altaf Ali.
Rai Sri Nath Ray.
Babu Akhil Chandra Datta.
Babu Surendra Nath Ray.
Babu Mohendra Nath Ray.
Babu Kshirod Bihari Dutta.
Babu Kishori Mohan Chaudhuri.
Mr. Ambika Charan Mazumdar.

SECRETARIAT.

Chief Secretary to Government, J. G. Cumming, C.I.E.
Secretary, Revenue Department, J. H. Kerr, C.I.E.
Secretary, General Department, L. S. S. O'Malley.
Secretary, Financial Department, J. Donald.
Secretary to the Council and Secretary, Legislative Department, A. W. Watson.
Secretary to Government, Public Works Department, and Chief Engineer, C. P. Walsh.
Under Secretary to Government, Public Works Department (Civil Buildings Branch), G. A. Easson.

BOARD OF REVENUE.

Officiating Member, Charles James Stevenson-Moore.

MISCELLANEOUS APPOINTMENTS.

Director of Public Instruction, W. W. Hornell.
Principal, School of Arts, P. Brown.
Inspector-General of Police, C. W. C. Plowden, C.I.E.
Commissioner, Calcutta Police, Reginald Clarke (Offg.).
Conservator of Forests, C. E. Muriel.
Surgeon-General, The Hon. W. R. Edwards.
Sanitary Commissioner, Lieut.-Colonel W. W. Clemesha.
Deputy Sanitary Commissioner for Malaria Research, Major A. B. Fry.
Collector of Customs, Calcutta, C. W. E. Cotton, B.A., I.C.S.
Commissioner of Excise and Salt, A. N. Moberly.
Accountant-General, H. G. Tomkins, C.I.E.
Inspector-General of Prisons, Lt.-Col. W. J. Buchanan. C.I.E.
Postmaster-General, P. G. Rogers, I.C.S.
Inspector-General of Registration, P. N. Mukharji.
Officiating Director of Agriculture, S. Milligan.
Protector of Emigrants, C. Banks, M.D.
Chairman of Calcutta Corporation, C. F. Payne.
Superintendent, Royal Botanic Gardens, Major A. T. Gage.
Coroner, F. K. Dobbin.
Registrar of Co-operative Credit Societies, J. M. Mitra.

LIEUTENANT-GOVERNORS OF BENGAL.

Frederick J. Halliday	1854
John P. Grant	1859
Cecil Beadon	1862
William Grey	1867
George Campbell	1871
Sir Richard Temple, Bart., K.C.S.I. ..	1874
The Hon. Ashley Eden, C.S.I.	1877
Sir Steuart C. Bayley, K.C.S.I. (*Offg.*) ..	1879
A. Rivers Thompson, C.S.I., C.I.E. ..	1882
H. A. Cockerell, C.S.I. (*officiating*) ..	1885
Sir Steuart C. Bayley, K.C.S.I., C.I.E. ..	1887
Sir Charles Alfred Elliott, K.C.S.I. ..	1890
Sir A. P. MacDonnell, K.C.S.I. (*Offg.*) ..	1893
Sir Alexander Mackenzie, K.C.S.I. ..	1895
Retired 6th April 1898.	
Charles Cecil Stevens, C.S.I. (*Officiating*) .	1897
Sir John Woodburn, K.C.S.I.	1898
Died, 21st Nov. 1902.	
J. A. Bourdillon, C.S.I. (*Officiating*) ..	1902
Sir A. H. Leith Fraser, K.C.S.I.	1903
Lancelot Hare, C.S.I., C.I.E. (*Offg.*) ..	1906
F. A. Slacke (*Officiating*)	1906
Sir E. N. Baker, K.C.S.I.	1908
Retired 21st Sept. 1911.	
F. W. Duke, C.S.I. (*Officiating*)	1911

The office of Lieutenant-Governor of Bengal was abolished on April 1st, 1912, when Bengal was raised to a Governorship.

GOVERNORS OF THE PRESIDENCY OF FORT WILLIAM IN BENGAL.

The Rt. Hon. Baron Carmichael of Skirling, G.C.I.E., K.C.M.G.	1912
The Rt. Hon. Earl of Ronaldshay, G.C.I.E.	1917

The United Provinces.

The United Provinces of Agra and Oudh lie in practically the centre of Upper India. They are bounded on the north by Tibet, on the north-east by Nepal, on the south and south-east by Bengal, on the south by two of the Chota Nagpur States of the Central India Agency and the Saugor District of the Central Provinces, and on the west by the States of Gwalior, Dholpur, Bharatpur, Sirmor, and Jubbal, and by the Punjab. Their total area amounts to 107,267 square miles, to which may be added the area of the two Native States of Tehri and Rampur, both of which lie within the United Provinces, 5,079 square miles and the newly-created independent State of Benares with an area of 865 miles, giving a total of 112,346 square miles. The total population is 48,014,080, out of which Tehri and Rampur account for 832,036.

The Provinces, originally termed the North-Western Provinces and so amalgamated in 1877, receiving their present designation in 1902, include four distinct tracts of country: portions of the Himalayas, the sub-Himalayan tracts (the Kumaon), the great Gangetic plain and portions of the hill systems of Central India (Bundelkhand). The first two of these tracts are infertile and support a very sparse population and the Central Indian plateau is almost equally infertile, though better populated. The soil of the Gangetic plain, however, possesses an extreme fertility and here the density of population rises from 512 persons per square mile in the west, to 549 in the centre and 718 in the east, which gives the Provinces as a whole a greater population pressure on the soil than any other Provinces in India. In the south there are low rocky hills, broken spurs of the Vindhyan mountains, covered with stunted trees and jungle, and in the North the lower slopes of the Himalayas, clothed with dense forest, affording excellent big and small game shooting, and rising beyond in a tangled mass of ridges, ever higher and higher, until is reached the line of the eternal snows, but the greater part of the provinces consists of level plain, teeming with highly-cultivated fields and watered by four rivers—the Ganges, Jumna, Gogra and the Gumti.

The People.

The population is mainly Hindu, 85 per cent. ranking as such whilst Mahomedans number 14 per cent., the total of all other religions being less than 0·6 per cent. composed of Christians (Europeans and Indians), Jains, Aryas and Sikhs; the Aryas are the followers of the Arya Samaj sect, which obtains widely in the Punjab and has extended its influence to the United Provinces. The three main physical types are Dravidian, Aryan and Mongoloid, the latter being confined to the Himalayan and sub-Himalayan districts and the former to South Mirzapur and Bundelkhand, whilst the high-caste Aryans frequent the western Districts of the Province. Most of the people, however, show a mixed Arya-Dravidian origin. Three languages are spoken by the great majority of the people in the plains—Western *Hindi*, Eastern Hindi and Behari; Urdu, or Hindustani, is a dialect of Western Hindi, though it contains a large admixture of Persian and Arabic words, which makes it a *lingua franca*.

Industries.

The principal industry is agriculture; which supports no less than 71·7 of the population. The soils of the Provinces fall into three groups; the valley soils of the Himalayas, the main alluvium and the Central Indian alluvium; the chief characteristic soil of the Central Indian alluvium is the black soil, with a lighter variant, though here also there are light loams and gravel. The Himalayan soils are of local origin and vary with the nature of the rock from which they have been formed, whilst the main alluvium soils are sand, clay and loam, the loam being, naturally, the most productive. The soil generally yields excellent crops of rice, millet, maize, linseed, cotton, wheat, sugarcane, pulses, barley and poppy, rice being grown mostly in low-lying, heavy clays. The greater part of the Provinces is highly cultivated, the rainfall varies from 50 to 60 inches in the Hills, to 40 inches in the Benares and Gorakhpur Divisions, whilst the Agra Division receives about 25 to 30 inches annually only. Drought seriously affected Bundelkhand and the Agra Division, in the past, but improved drainage, and irrigation (a protective system of irrigation works exists and is being extended) have enabled a complete recovery to be made and the agricultural prosperity of the Provinces is now high, though it varies with the rainfall. The great scourge has been, and is, that of plague, which hampers the agriculturist severely, and in the Terai, malaria still exacts a large toll Land is held mostly on the ryotwari tenure in Bundelkhand and Kumaon, on zemindari tenure in Agra and taluqdari tenure in Oudh. The principal land owners in Oudh are the Taluqdars, some of whom own very large estates. The area held in taluqdari tenure amounts to 51 per cent. of the total area in Oudh.

Manufactures.

The Provinces are not rich in minerals. Coal exists in Southern Mirzapur, iron and copper are found in the Himalayan Districts, and there were mines of importance there formerly, but increased difficulty of working them as veins became exhausted resulted in the closure of most of them. Gold is found in minute quantities by washing in some of the rivers in the Hills. Limestone is found in the Himalayas and stone is largely quarried in the Mirzapur District. Cotton is ginned and spun throughout the provinces, as a home industry, and weaving, by means of hand-looms, is carried on in most districts. In 1901 nearly a million persons were dependent on weaving, 140,000 on spinning and 136,000 on cleaning, pressing, and ginning, but during the last decade these industries have been on the decrease. The largest industry is in Azamgarh district, where there are 130,000 looms. Silk spinning is confined almost entirely to the district of Benares; where the famous *Kinkob* brocade is made. Em-

broidery is manufactured in Lucknow, where the noted *chikan* work of silk on cotton or muslin, is produced, and in Benares, where gold and silver work on velvet silk, crepe and sarsenet obtains. The glass industry is important in some districts, Benares and Moradabad are noted for their lacquered brass work, porcelain is manufactured at Ghazipur, and other industries are those of paper-making (Lucknow) dyeing, leather-work and fireworks. The chief centre of European and Indian industry is Cawnpore, which, situated in most advantageous position on the Ganges, possesses tanneries, cotton, woollen, jute and other mills, which have a large and ever increasing output (the woollen mill is the largest in India). There are cotton factories at Aligarh (famous for its locks), Meerut and Bareilly; Mirzapur (which produces also excellent carpets), Hardoi and Hathras have cotton mills. Excellent furniture is made at Bareilly, at Allahabad there are stone works, at Rosa there is a very large English distillery, with patent still, and the provinces can claim six breweries, with an out-turn of over a million gallons.

The largest trade centres are Cawnpore, Allahabad, Mirzapur, Benares, Lucknow, Meerut, Aligarh, Hathras, Muttra, Agra, Farukhabad, Moradabad, Chandausi, Bareilly, Saharanpur, Muzufarnagar, Ghaziabad, Khurja, Gorakhpur, Ghazipur, Pilibhit and Shahjahanpur.

Administration.

The Provinces are administered by a Lieutenant-Governor, who is generally chosen from among the members of the Indian Civil Service who have served in the Province. The medium for the transaction of public business is the Secretariat, the Staff of which consists of five Secretaries and five Under-Secretaries. The Chief Secretary is in charge of the Revenue, Appointment, General Administration, Political and Forest Departments; another Secretary attends to the Medical, Judicial, Police, Educational and Sanitation Departments; whilst a third looks to the local Self-Government, Financial, Municipal, Miscellaneous and Separate Revenue Departments. The other two Secretaries belong to the Public Works Department, and are also Chief Engineers, one of whom deals with Irrigation, and the other with Roads and Buildings. Government spends the cold weather, October to April, in Lucknow and Allahabad, mostly in Lucknow, the Secretariat moves between these two places. The Lieutenant-Governor and the Secretariat spend the hot weather in Naini Tal, but during the monsoon the Lieutenant-Governor tours the plains, as he does also in the cold weather. The Board of Revenue is the highest court of appeal in revenue and rent cases, and it has important executive duties, being the chief revenue authority in the Provinces. There are forty-eight British districts, thirty-six in Agra and twelve in Oudh, average area 2,000 square miles and average population a million. Each District is in charge of a District Officer, termed a Collector and Magistrate in Agra and a Deputy Commissioner and Magistrate in Oudh and Kumaon, who is an Indian Civilian. The Districts are grouped together in Divisions under a Commissioner. There are nine Divisions, having an average area of nearly 12,000 square miles and a *population of from 5 to 6 millions.* The Districts are sub-divided into *tahsils*, of which there are 217, with an average area of 500 square miles and a population of 220,000. Each *Tahsil* is in charge of a *Tahsildar*, who is responsible for the collection of revenue, and also exercises judicial powers. *Tahsils* are divided into *parganas* which are units of importance in the settlement of land revenue. Subordinate to the *Tahsildars* are *kanungos*, of whom there are, on an average, three to a *tahsil*. These officials supervise the work of the *patwaris*, or village accountants, check their papers and form a link direct between the villagers and Government. For judicial purposes (revenue and criminal), the District Officer assigns a subdivision, consisting of one or more *tahsils*, as the case may be to each of his subordinates, who may be covenanted civilians, (Joint and Assistant Magistrates and Collectors) or members of the Provincial Service (Deputy Collectors and Magistrates). The Commissioner of the Bareilly and Kumaon Divisions are Political Agents for the Native States of Rampur and Tehri respectively and the Commissioner of Benares is the Political Agent for Benares State.

Justice.

Justice is administered by the High Court in the Province of Agra, and the Court of the Judicial Commissioner, in Oudh, which are the final appellate authorities in both criminal and civil cases. The former, which consists of a Chief Justice and five puisne Judges, two of whom are Indians, sits at Allahabad, and the latter, represented by a Judicial Commissioner and two Additional Commissioners, one of whom is an Indian, sits always in Lucknow. There are twenty-seven District and Additional District Judges, (Indian Civilians) twenty-one in Agra and six in Oudh, who have both original and appellate jurisdiction in civil and criminal cases, and occasional appellate jurisdiction in rent cases, but District Officers and their assistants, including *Tahsildars*, preside in both criminal and rent and revenue courts, and dispose of a good deal of the work. In Kumaon, the Commissioner is a High Court Judge in Civil cases, and a District Judge in Criminal cases. In the larger Cantonments, the Cantonment Magistrates have limited powers as Judges of a Small Cause Court. There are also Subordinate Judges, Judges of Small Cause Courts and Munsifs, who dispose of a large number of small civil suits, being specially empowered, in some cases, to decide suits up to Rs. 2,000, but generally they take cases up to Rs. 1,000, whilst Subordinate Judges hear cases up to Rs. 5,000. Appeals from Munsifs and Subordinate Judges go to the District Judges. Small Cause Court Judges try suits to the value of Rs. 500. There are also Honorary Munsifs, limited to Rs. 200 suits, and village Munsifs, whose jurisdiction is fixed at Rs. 20.

Local Government.

Local Government is exercised by means of District and Municipal Boards, the former levying local rates on land-owners; the latter deriving its revenue from octroi and other forms of taxation. The aim is to abolish octroi, because it interferes with through trade. Eighty-five Municipalities possess the privilege of electing their own members and all the principal Boards now have

non-official Chairman, with an Executive Officer who is directly responsible to the Board in all matters. Local self-government has been given a wider extension by the Municipalities Act, passed in 1916, under which the responsibilities of the boards and their chairmen have been largely increased. They deal with questions of sanitation, communication, lighting, town improvement, roads, water supply, drainage and education. Grants are made to Boards by Governments in some cases for special purposes from general revenues. Small towns, termed Act XX towns, also enjoy some measure of local self-government and it is under consideration to extend the principle here, too.

Finance.

The Financial history of the Province has not been a happy one, inadequate settlements, *i.e.*, contracts between the Government of India and the local Government, and the severe famine in 1896 having caused Provincial bankruptcy, which for a long time necessitated rigid economy in order to accumulate reserves which could be spent on productive works. Recently liberal Imperial assignments have been made by the Government of India and the financial prospects are accordingly much brighter, though the war is naturally hampering progress. The local government gets 3-8 only of the land revenue. The Provincial Budget for 1917-18 shows an opening balance of 172 lakhs, revenue 695 lakhs, and expenditure 695 lakhs, and a closing balance of 172 lakhs.

Public Works.

The Public Works Department is divided into the Roads and Buildings branch and the Irrigation branch, each of which is administered by a Chief Engineer, who is also a Secretary to Government. The Provinces are divided into three circles and ten divisions for the administration of roads and buildings, and into four circles and twenty divisions for irrigation purposes. Each circle is in charge of a Superintending Engineer, and each division is in charge of an Executive Engineer. The whole of the irrigation works constructed or maintained by Government are in charge of the Department, nearly all metalled roads, and also bridges on second-class roads, and generally, all works costing more than Rs. 1,000, except in Municipalities. The most important irrigation works within the last twenty years have been the construction of the Betwa Canal, the Fatehpur branch of the Lower Ganges Canal, the Mat branch of the main Ganges Canal, improvements in the Rohilkhand and Terai Canals and extensive drainage operations in the Doab districts of the Meerut and Agra division. Important irrigation extension works are now being considered. The budget for irrigation and other public works for the present year is 128 *lakhs*.

Police.

The Police Force is divided into District and Railway Police and is administered by an Inspector-General, with five Deputies, one of whom is in charge of Railways, and two Assistants, forty-nine District Superintendents, two Railway Superintendents, and thirty Assistant Superintendents. There is a Police Training School at Moradabad. There is a local C. I. D. forming a separate detective department, under a Deputy Inspector General, with an assistant. There is an armed police, specially recruited, and armed with the Martini Rifle. The present cost of the force is 127 lakhs. The administration of the Jail department is in charge of an Inspector-General of Prisons, who is a member of the Indian Medical Service.

Education.

Education is in part wholly State-maintained; and partly by means of grants-in-aid. There is a State University at Allahabad, a Government Sanskrit College at Benares, whilst Arabic and Persian are taught in special classes at the Muir College, Allahabad, which also has a special science side, which of late has been greatly extended, and there is a Government Engineering College at Roorkee (Thomason College). There are aided Colleges in Lucknow (Canning College), (Reid Christian College), and (Isabella Thoburn College), Agra (St. John's), Aligarh (the Mahomedan Oriental College), Gorakpur, Cawnpore and Meerut, and an unaided College at Benares, the Central Hindu College. In Lucknow there is the Martiniere school, an entirely independent institution, for European and Anglo-Indian children, and there is a Girls' Martiniere connected with it, whilst in the Hill-Stations, Naini-Tal and Mussoorie, there are many excellent private scholastic institutions for European boys and girls, which are attended by students from all over India. Government maintain Training Colleges, for teachers in Lucknow and Allahabad, an Art Crafts and an Industrial School in Lucknow, and an Agricultural College at Cawnpore. Public Schools are almost entirely maintained by the District and Municipal Boards and primary education is almost entirely in their hands. Primary and female education are in a very backward condition, though there was in 1915-16 an increase in pupils under both heads. Technical education is being pushed forward. The total number of schools of all kinds decreased by 170 to 17,631, but that of scholars rose from 832,454 to 841,334. The number of secondary public schools (high schools and middle schools, English and vernacular) for Indian boys rose from 594 to 611, while the number of scholars fell from 102,042 to 97,048. The decrease was wholly in vernacular schools. Students receiving collegiate education rose from 7,121 to 7,487: of these 5,443 were learning English, 3,369 a classical language and 280 a vernacular. The amount budgetted for education this year is 68 lakhs.

Higher education is controlled by the Allahabad University (constd. in 1887) which consists of a Chancellor, Vice-Chancellor and seventy-five ordinary and four *ex-officio* Fellows, of whom some are elected by the Senate or by registered graduates and the Faculties, and the remainder nominated by the Lieutenant-Governor, in his capacity of Chancellor. The Faculties are those of Art, Science, Law and Medicine, and the University possesses an important Law School. It is proposed to establish a Mahomedan University at Aligarh and a Hindu University has been inaugurated at Benares

The principal educational institutions are :—

The Mahomedan Anglo-Oriental College, Aligarh—Principal, J. H. Towle.

The Central Hindu College, Benares—Principal, P. B. Adhikari, offg.

St. John's College, Agra—Principal, Rev. A. W. Davies.

Muir College, Allahabad—Principal, S. G. Jennings.

Queen's College, Benares—Principal, P. S. Barrel.

Canning College, Lucknow—Principal, M. B. Cameron.

Agra College—Principal, T. Cuthbertson Jones.

Reid Christian College, Lucknow—Principal, Rev. T. C. Badley.

Meerut College—Principal, William Jesse.

Woodstock College, Mussoorie—Principal, Rev. H. M. Andrews.

Bareilly College—Principal, J. H. Alderson.

Christian College, Allahabad—Principal, Rev. C. A. R. Janvier.

Christ Church College, Cawnpore—Principal, Rev. M. S. Douglas.

Isabella Thoburn College, Lucknow—Principal, Miss Robinson.

Thomason College, Roorkee—Principal, Lt.-Col. E. H. de Vere Atkinson.

King George's Medical College, Lucknow—Offg. Principal, Major J. W. D. Megaw, I.M.S.

Medical.

The Medical Department is in charge of an Inspector-General of Civil Hospitals. A Civil Surgeon is in charge and is responsible for the medical work of each district, and in a few of the larger stations he has an assistant. In two stations (Ranikhet and Almora) Medical Officers in military employ hold collateral civil charge. There are eighty-three Assistant Surgeons in charge of important dispensaries and a large number of Indian hospital assistants. Lady doctors and female hospital assistants visit *purda nashin* women in their own homes and much good work is done in this manner.

The best equipped hospitals, for Indian patients are the Thomason Hospital at Agra and the Balrampur Hospital at Lucknow. The Ramsay Hospital for Europeans at Naini Tal is a first class institution and there are also the Lady Dufferin Hospitals. King George's Medical College and the hospital in connexion with it have been opened recently in Lucknow. The College is one of the best equipped in the country, with a staff of highly efficient professors, and the hospital is the first in the Provinces. There is an X-Ray Institute at Dehra Dun, where valuable research work has been carried out and the Pasteur Institute at Kasauli take cases from all parts of India, and there are sanatoria for British soldiers in the Hills.

Administration.

Lieutenant-Governor, Sir J. S. Meston, K.C.S.I. Assumed charge of office, 16th September 1912.

Private Secretary, C. W. Gwynne, I.C.S.

Honorary Aides-de-Camp, Lieut.-Col. P. H. Clutterbuck, Lieut.-Col. J. H. E. Beer, C.I.E., V.D., Lieut.-Col. J. Walker, V.D., Hony. Capt. Subadar Major Chanu Singh Burathoki Risaldar Major Qudrat Khan Bahadur.

Legislative Council of the Lieutenant-Governor.

President, The Lieutenant-Governor.

Vice-President, J. M. Holms, C.S.I.

Members.

Nawab Muhammad Muzammil-Ullah Khan, Khan Bahadur, of Bhimrampur.

Kunwar Aditya N. Singh, of Benares.

J. S. Campbell, C.S.I., C.I.E.

Raja Sir Muhammad Tasadduk Rasul Khan, K.C.S.I.

Nawab Mumtaz-ud-daula Sir Muhammad F. Ali Khan, K.C.I.E., K.C.V.O., C.S.I., of Pahasu.

A. W. Pim.

A. L. Saunders, C.S.I.

R. Burn.

G. T. Barlow.

W. S. Marris.

S. P. O'Donnell.

Herbert Morton Willmott.

Rai Janki Prasad Bahadur.

Col. C. Mactaggart, C.I.E., I.M.S

C. F. de la Fosse.

F. Mackinnon.

H. R. C. Hailey.

H. C. Ferard.

W. E. Crawshaw.

Rai Anand Sarup Bahadur.

William Hey Cobb.

Henry Mayne Reid Hopkins.

Mirza Sami Ullah Beg.

Tara Dat Gairola.

Sir Sundar Lal.

Pandit Jagat Narayan.

Lala Madhusudan Dayal.

Munshi N. P. Ashthana.

Moti Lal Nehru.

Rai Sadanand Pande Bahadur.

Maharaja Sir Bhagwati Prasad Singh, K.C.I.E. of Balrampur.

Raja Kushalpal Singh.

Rai Ashbhuja Prasad Bahadur.

Saiyid Raza Ali.

Rai Shankar Sahai Saheb.

Radha Kishan Das.

C. Y. Chintamani.

Gokaran Nath Misra.

Sukbir Singh.

Raja Chandra Chur Singh.

Babu Moti Chand.

Nawab Muhammad Abdul Majid

Logie P. Watson.

E. H. Ashworth.

Saiyid Al-i-Nabi Khan Bahadur.
Sayid Wazir Hasan.

SECRETARIAT.

Chief Secretary to Government, R. Burn.
Financial Secretary to Government, G. G. Sim, I.C.S.
Judicial ,, ,, S. P. O'Donnell.
Secretary to Government, Public Works Dept. (Buildings & Roads, & Railways), H. M. Willmctt.
Secretary to Government, Public Works Dept. (Irrigation), G. T. Barlow.
Registrars, F. E. Lowe, A. Grant, A. M. Jelly, F. C. Richardson, A. M. Jelly and C. St. L. Teyen.

BOARD OF REVENUE.

Members, J. M. Holms, C.S.I., J. S. Campbell, C.S.I., C.I.E.

MISCELLANEOUS APPOINTMENTS.

Opium Agent, Ghazipur, C. E. Wild.
Director of Land Records and Agriculture, H. R. C. Hailey.
Director of Public Instruction, C. F. de la Fosse.
Inspector-General of Police, D. M. Straight. (On military duty); W. S. Marris, *Sub. pro tem.*
Inspector-General of Civil Hospitals, Col. C. Mactaggart, M. A., M.B., C.I.E., I.M.S.
Sanitary Commissioner, Lieut.-Col. S. A. Harriss, I.M.S.
Inspector-General of Registration, W. Raw.
Commissioner of Excise, T. A. H. Way.
Accountant-General, Upendralal Mazumdar, M. A. (on leave); Jyotish Chandra Mitra, M.A., B.L.
Inspector-General of Prisons, Lt.-Col. S. H. Henderson, M.B., C.M., I.M.S.
Postmaster-General, Lionel Truninger, C.I.E.
Chemical Analyser, Dr. E. H. Hankin.

LIEUTENANT-GOVERNORS OF THE NORTH-WESTERN PROVINCES.

Sir C. T. Metcalfe, Bart., G.C.B.	1836
The Right Hon. the Governor-General in the North-Western Provinces (Lord Auckland).	1838
T. C. Robertson	1840
The Right Hon. the Governor-General in the North-Western Provinces (Lord Ellenborough).	1842
Sir G. R. Clerk, K.C.B.	1843
James Thomson. Died at Bareilly. ..	1843
A. W. Begbie, *In charge*	1853
J. R. Colvin. Died at Agra.	1853
E. A. Reade, *In charge*	1857
Colonel H. Fraser, C.B., Chief Commissioner, N.-W. Provinces.	1857
The Right Hon. the Governor-General administering the N.-W. Provinces (Viscount Canning).	1858
Sir G. F. Edmonstone	1859
R. Money, *In charge*	1863
The Hon. Edmund Drummond	1863
Sir William Muir, K.C.S.I.	1868
Sir John Strachey, K.C.S.I...	1874
Sir George Couper, Bart., C.B.	1876

LIEUTENANT-GOVERNORS OF THE NORTH-WESTERN PROVINCES AND CHIEF COMMISSIONERS OF OUDH.

Sir George Couper, Bart, C.B., K.C.S.I.	1877
Sir Alfred Comyns Lyall, K.C.B.	1882
Sir Auckland Colvin, K.C.M.G., C.I.E. ..	1887
Sir Chas. H. T. Crosthwaite, K.C.S.I. ..	1892
Alan Cadell (*Officiating*)	1895
Sir Antony P. MacDonnell, K.C.S.I. (*a*) ..	1895
Sir J. J. D La Touche, K.C.S.I.	1901

(*a*) Afterwards (by creation) Baron MacDonnell.

LIEUTENANT-GOVERNORS OF THE UNITED PROVINCES OF AGRA AND OUDH.

Sir J. J. D. La Touche, K.C.S.I.	1902
Sir J. P. Hewett, K.C.S.I., C.I.E.	1907
L. A. S. Porter, C.S.I. (*Officiating*).. ..	1912
Sir J. S. Meston, K.C.S.I.	1912

The Punjab.

The Punjab; or land of the five rivers, is so called from the five rivers by which it is enclosed, namely, the Jhelum, Chenab, Ravi, Beas and Sutlej. Together with the North-West Frontier Province and the Native State of Jammu and Kashmir which lie to the north, the Punjab occupies the extreme north-western corner of the Indian Empire, and with the exception of the above-mentioned province, comprises all of British India north of Sind and Rajputana and west of the river Jumna. Previous to October 1912, the Punjab with its feudatories embraced an area of 136,330 square miles and a population at the Census of 1911 of 24,187,750 (inclusive of 28,587 trans-frontier Baluchis) that is to say, about one-thirteenth of the area and population of the Indian Empire. But the formation of a separate province of Delhi reduced the area and population of the Punjab by about 450 square miles and 380,000 souls respectively. Of the total area of the Punjab, 36,551 square miles are in Native States (34 in number) with a population of 4,212,794, and 2,566 square miles are tribal territory on the western border of Dera Ghazi Khan district with a population of 28,587.

Physical Features.

The greater part of the Punjab consists of one vast alluvial plain, stretching from the Jumna in the east to the Suleman Range in the west. The north-east is occupied by a section of the Himalayas and the Salt Range forms its north-western angle. A few small spurs of the Aravalli mountain system traverse the extreme south-east and terminate in the Ridge at Delhi. The Punjab may be divided into five natural divisions. The Himalayan tract includes an area of 22,000 square miles, with a scanty population living scattered in tiny mountain hamlets. The Salt Range tract includes the districts of Attock, Rawalpindi and Jhelum and part of Shahpur district. Its physical configuration is broken and confused and the mountainous tracts of Murree and Kahuta approximate closely in characteristics to the Himalayan tract. Except in the hills, the rainfall leaves little margin for protection against distress in unfavourable seasons and irrigation is almost unknown. Skirting the base of the hills and including the low range of the Siwaliks, runs the narrow sub-montane tract. This tract, secure in an ample rainfall, and traversed by streams from the hills, comprises some of the most fertile and thickly populated portions of the province. Its population of over four millions is almost wholly agricultural and pastoral but it includes one large town in Sialkot. Of the plains of the Punjab, the eastern portion covers an area of some 36,000 square miles with a population of 10½ millions. East of Lahore, the rainfall is everywhere so far sufficient that cultivation is possible without irrigation in fairly favourable seasons, but over the greater part of the area the margin is so slight that, except where irrigation is employed, any material reduction in the rainfall involves distress, if not actual famine. Within the eastern plains lie the large cities of Lahore and Amritsar, and the population in comparison with the western Punjab is largely urban. The western plains cover an area of 59,000 square miles, with a population of a little over six millions. The rainfall in this area, heaviest in the north and east and decreasing towards the west and south, is everywhere so scanty that cultivation is only possible with the aid of artificial irrigation or upon the low-lying river-banks left moist by the retreating floods. In this very circumstance, these tracts find their scarcity against famine, for there cultivation is almost independent of rain, a failure of which means nothing worse than a scarcity of grass. So little rain is sufficient, and absolute drought occurs so seldom that the crops may be said never to fail from this cause. The western plains embrace the great colony areas on the Lower Chenab and Lower Jhelum Canals which now challenge the title of the eastern plains as the most fertile, wealthy and populous portions of the province. Multan and Lyallpur are the largest towns in the western area. Owing to its geographical position, its scanty rainfall and cloudless skies, and perhaps to its wide expanse of untilled plains, the climate of the Punjab presents greater extremes of both heat and cold than any other portion of India. The summer, from April to September, is scorchingly hot, and in the winter, sharp frosts are common. But the bright sun and invigorating air make the climate of the Punjab in the cold weather almost ideal.

The People.

Of the population roughly one half is Mahomedan, three-eighths Hindu and one-eighth Sikh. Socially the landed classes stand high and of these the Jats, numbering nearly five millions, are the most important. Roughly speaking, one half the Jats are Mahomedan, one-third Sikh and one-sixth Hindu. In distribution they are ubiquitous and are equally divided over the five divisions of the province. Next in importance come the Rajputs, who number over a million and a half. The majority of them are Mahomedans by religion, about a fourth are Hindus and a very few Sikhs. They are widely distributed over the province. Both Jats and Rajputs of the Punjab provide many of the best recruits for the Indian Army. The Gujars are an important agricultural and pastoral tribe, chiefly found in the eastern half of the province and in the extreme north-west. In organisation they closely resemble the Jats and are often absorbed into that tribe. There are many minor agricultural tribes, priestly and religious castes (Brahmans, Sayads and Kureshis), most of whom are landholders, the trading castes of the Hindus (Khatris, Aroras and Banias) and trading castes of the Mahomedans (Khojas, Parachas and Khakhas), and the numerous artisan and menial castes. There are also vagrant and criminal tribes, and foreign elements in the population are represented by the Baluchis of Dera Ghazi Khan and neighbouring districts in the west, who number about half a million and maintain their tribal system, and the Pathans of the Attock and Mianwali districts. Pathans are also found scattered all over the province engaged in

horse-dealing, labour and trade. A small Tibetan element is found in the Himalayan districts.

Languages.

The main language of the province is Punjabi, which is spoken by more than half the population. Western Punjabi may be classed as a separate language, sometimes called Lahndi, and is spoken in the north and west. The next most important languages are Western Hindi, which includes Hindustani, Urdu (the polished language of the towns) and other Hindi; Western Pahari, which is spoken in the hill tracts; and Rajasthani, the language of Rajputana. Baluchi, Pushto, Sindhi and Tibeto-Burman languages are used by small proportions of the population.

Agriculture.

Agriculture is the staple industry of the province, affording the main means of subsistence to 56 per cent. of the population. It is essentially a country of peasant proprietors. About one-sixth of the total area in British districts is Government property, the remaining five-sixths belonging to private owners. But a large part of the Government land is so situated that it cannot be brought under cultivation without extensive irrigation. Thus the Lower Chenab Canal irrigates nearly 1,900,000 acres of what was formerly waste land and the Lower Jhelum Canal, 390,000 acres, and the Lower Bari Doab Canal, when the colonisation scheme is completed, will add 1,200,000 acres to this total. Large areas in the hills and elsewhere which are unsuited to cultivation are preserved as forest lands, the total extent of which is about 8,700 square miles. Of the crops grown, wheat is the most important and the development of irrigation has led to a great expansion of the wheat area, which now occupies in an average year over 8¾ millions of acres. The average annual outturn of wheat is 3,000,000 tons, valued at present prices at approximately £20,000,000. Next in importance to wheat is gram, the average annual produce of which is a million tons valued at £5,000,000. Other important staples are barley, rice, millets, maize, oilseeds (rape, toria and sesamum,) cotton and sugarcane. Cotton is grown generally throughout the province but the ravages of boll-worm have affected the popularity of the crop. The cotton grown is of the short stapled variety, known as 'Bengals'. The country being preponderantly agricultural, a considerable proportion of the wealth of the people lies in its live-stock. The latest cattle census gives the following figures:—cattle, nearly 8,000,000 head: buffaloes, about 850,000; bovine young stock, 3,800,000; sheep, 4,500,000, goats, 4,250,000. Large profits are derived from the cattle and dairy trades and wool is a staple product in the south-west in Kulu and Kangra and throughout the plains generally. The production of hides and skins is also an important industry.

Industries.

The mineral wealth of the Punjab is small, rock salt, saltpetre, and limestone for road-building being the most important products. There are some small coal mines in the Jhelum district, with an output of about 50,000 tons a year, and gold-washing is carried on in most of the rivers, not without remunerative results. Iron and copper ores are plentiful but difficulties of carriage and the absence of fuel have hitherto prevented smelting on a large scale. The Punjab is not a large manufacturing country, the total number of factories being only 184, the majority of which are devoted to cotton ginning, cleaning and pressing. Cotton weaving as a domestic industry is carried on by means of hand looms in nearly every village. The Salvation Army has shown considerable enterprise in improving the hand-weaving industry. Blankets and woollen rugs are also produced in considerable quantities and the carpets of Amritsar are famous. Silk-weaving is also carried on and the workers in gold silver, brass, copper and earthernware are fairly numerous and ivory carving is carried on at Amritsar and Patiala. The trade of the province is steadily expanding, the total internal trade being valued at 65¼ crores of rupees. The external trade with Afghanistan, Ladakh and Tibet is valued at 34 lakhs.

Administration.

The administrative functions of Government are performed by a Lieutenant-Governor, appointed by the Governor-General with the approval of the Crown. The Lieutenant-Governor in practice is always a member of the Indian Civil Service though military members of the Punjab Commission are eligible for the position. The Punjab Commission, the body which is responsible for the Civil administration of the province, is recruited from the Indian Civil Service and the Provincial Civil Service. Up to the date of the separation of the North-West Frontier Province from the Punjab, one-fourth of the cadre was drawn from the Indian Army. The business of Government is carried on through the usual Secretariat which consists of three Secretaries; designated (1) Chief, (2) Revenue and (3) Financial Secretaries, and three Under-Secretaries. There is also at present an Additional Secretary. In the Public Works Department, there are also three Secretaries (Chief Engineers), one in the Buildings and Roads Branch and two in the Irrigation Branch. The heads of the Police and Educational Departments are also Under-Secretaries to Government. The Government spends the winter in Lahore and the summer (from the middle of May to the middle of October) in Simla. The Lieutenant-Governor has no Executive Council, but is assisted in legislative business by a Legislative Council of 28 members, of whom 11 are elected and 17 nominated by the Lieutenant-Governor. Of the nominated members, not more than 11 may be officials, in addition there may be two nominated expert members. Under the Lieutenant-Governor, the province is administered by five Commissioners (for Ambala, Jullundur, Lahore, Rawalpindi and Multan) who exercise general control over the Deputy Commissioners—28 in number—each of whom is in charge of a district. A district on an average contains four tahsils, each consisting of about 300 villages. The Deputy Commissioner is usually a Covenanted Civilian or military member of the Punjab Commission, although five Deputy Commissionerships are "listed" for Provincial Civil Servants. The Deputy Commissioner has under him one or more Assistant Commissioners (Coven-

anted Civilians) and one or more Extra Assistant Commissioners (Provincial Civilians). In some cases, one or more tahsils form a subdivision under the charge of a sub-divisional officer who has wide powers. The tahsil is in charge of a Tahsildar, in some cases assisted by one or more Naib Tahsildars. The village is under a Lambardar or headman and in most districts the villages are grouped into zails, each under a zaildar. The lambardars and zaildars are "village officers" and not Government-servants. The district Land Records and Excise staff, though organised for special departmental purposes, is available for general administrative work. The Native States of the province are arranged for the purposes of supervision into five groups, each under the charge of a Political Agent. Except in the case of the Sikh Phulkian States (Patiala, Jhind and Nabha) and the Bahawalpur Agency, the Political Agent is either the neighbouring Commissioner or Deputy Commissioner. The principal heads of Department in the province are the two Financial Commissioners (who are the highest Court of Revenue jurisdiction, and heads of the departments of Land and Separate Revenue and of Agriculture and the Court of Wards), the three Chief Engineers, the Inspector-General of Police, the Director of Public Instruction, the Inspector-General of Prisons, the Inspector-General of Civil Hospitals, the Sanitary Commissioner, the Conservator of Forests, the Director of Agriculture and Industries, the Inspector-General of Registration, the Registrars of Co-operative Credit Societies and Joint Stock Companies and the Legal Remembrancer. The Accountant-General, the Postmaster-General, the Director of Telegraph Engineering, and the Agent, North-Western Railway, represent Imperial Departments under the Government of India.

Justice.

The administration of justice is entrusted to a Chief Court, which is the final appellate authority in civil and criminal cases, and has powers of original criminal jurisdiction in cases where European British subjects are charged with serious offences and original civil jurisdiction in special cases. The Court sits at Lahore and is composed of a Chief Judge and four puisne judges (either Civilians or barristers), a sixth additional judge whose appointment is sanctioned for two years and a seventh and eighth additional judge whose appointment is sanctioned for one year. For some years past there has been a strongly supported movement in the province in favour of raising the Court to the status of a High Court, and the Secretary of State has sanctioned the proposal though the change will not take effect till after the war. Subordinate to the Chief Court are the District and Sessions Judge (22 in number) each of whom exercises civil and criminal jurisdiction in a civil and sessions division comprising one or more districts. They hear most of the first appeals in Civil suits and try sessions cases and hear criminal appeals from the district and first class magistrates. One or two divisions have an additional judge and in many districts a Subordinate Judge exercising unlimited civil jurisdiction, is appointed to assist the District Judge but the majority of civil suits are tried in the first instance by Munsifs whose jurisdiction is limited to suits not exceeding Rs. 1,000 in value. The assistants to Deputy Commissioners are always invested with the powers of a Munsif, but the former practice of investing Tahsildars with Munsif's powers is being gradually discontinued. At Lahore, Amritsar and Simla there are Courts of Small Causes. The Deputy Commissioner is the District Magistrate and controls the subordinate Criminal Courts of the District. All the assistants of the Deputy Commissioner as well as the District and Subordinate Judges, but not the Munsifs, are invested with magisterial powers. Tahsildars usually exercis the powers of a second class magistrate an Naib Tahsildars those of the third class, an considerable assistance is obtained from Honorary Magistrates who sit either singly or as a bench. In districts in which the Frontier Crimes Regulation is in force the Deputy Commissioner on the finding of a Council of Elder (Jirga) may pass sentence up to four years imprisonment. In all cases capital sentences require the confirmation of the Chief Court. Special Revenue Courts to decide all suits regarding tenant right, rents and cognate matters in which civil courts have no jurisdiction have been established under the Punjab Tenancy Act. The Financial Commissioners are the final court of appeal in revenue cases.

Local Government.

Local control over certain branches of the administration is secured by the constitution of district boards exercising authority over a district and of municipalities exercising authority over a city or town. A few districts have local boards which exercise authority over a tahsil. These bodies are composed of members either nominated by Government or elected by the people and they are empowered to spend the funds at their disposal on schools and dispensaries, vaccination, sanitation, roads and rest houses and general improvements. The funds of district boards are derived mainly from a cess on the land revenue of the district supplemented by grants from Provincial Funds, and those of municipalities from octroi, local taxation and Government grants. In the smaller towns which are known as "notified areas", a simpler form of government than the municipal system is in force. Where the elective principle is in force as regards both district boards and municipalities, the public shows very little interest in the elections, except in a few cases where sectarian feeling runs high.

Finance.

Under the present system of decentralisation in finance, the Imperial Government delegates to the Punjab Government the control of expenditure on the ordinary administrative services together with the whole or a certain proportion of certain heads of revenue sufficient to meet those charges. Of the various heads of revenue post office, telegraphs, railways, opium and salt are entirely Imperial. Land revenue, stamps, excise, income-tax and major irrigation works are divided between the Imperial and Provincial Governments in the proportion of one half to each. Minor irrigation works and some minor heads are divided in varying proportions, while the

revenue from forests, registration, courts of law, jails, police and education are wholly provincial as well as the income of district boards and municipalities. The Budget for 1917-18 shows a total revenue (including opening balance) of Rs. 5,19,40,000, and a total expenditure of Rs. 5,17,39,000 leaving a closing balance of Rs. 1,05,09,000.

Public Works.

As was stated in the section on "Administration" the Public Works Department is divided into two branches, one for Buildings and Roads and the other for Irrigation. In the former branch, under the Chief Engineer, the province is divided into three circles under Superintending Engineers and 11 divisions under Executive Engineers. The primary object of this branch is the construction and maintenance of Imperial and Provincial works, but it also assists municipalities and district boards. The Irrigation branch is under two Chief Engineers, one of whom is also Chief Engineer of Irrigation Works in the North-West Frontier Province. Under them are nine Superintending Engineers in charge of circles and 39 Executive Engineers in charge of divisions. In addition to the work of construction and maintenance Irrigation Officers are responsible for the assessment of water rates leviable on irrigated areas and in several districts where the land revenue demand is assessed on the fluctuating principle, for the formulation of this demand on irrigated crops as well.

Irrigation.

The canal system of the Punjab is admittedly one of the greatest achievements of British rule in India. Not including the enormous Triple Canal project recently completed, the total irrigated area in British districts and Native States amounts to 8,269,233 acres. The Beas is the only one of the great rivers of the province from which no canal takes off. The Indus provides supplies for two large series of inundation canals, one on either bank. Taking off from the Jhelum is the Lower Jhelum perennial canal, with 150 miles of main channel and 1,000 miles of distributaries and lower down the river is a large series of inundation canals. The Lower Chenab perennial canal takes off from the Chenab and comprises 427 miles of main channel and branches and 2,278 miles of branches, while below the junction of the Chenab and Ravi rivers is a series of inundation canals on both banks. The Ravi provides supplies for the Upper Bari Doab Canal, which has 370 miles of main line and branches and 1,571 miles of distributaries. Some small inundation canals and the Sidhani system with a length of 200 miles also take off from the Ravi. The Sirhind Canal, which has a main line and branches of 538 miles and distributaries amounting to 3,703 miles, takes off from the Sutlej, and there are two systems of inundation canals deriving their supplies from the Upper and Lower Sutlej respectively in addition to the Grey Canals maintained on the cooperative system in the Ferozepore district and a vast series of inundation canals in Bahawalpur State. The Western Jumna Canal, which takes off from the right bank of the Jumna, has a main line and branches of 377 miles and distributaries of 1,764 miles. The Triple Canal project is intended to carry surplus water from the Jhelum and the Chenab to supplement the scanty supplies in the lower reaches of the Ravi and incidentally to afford irrigation to the tracts through which the supply channels pass. The three canals included in the project are known as the Upper Jhelum, Upper Chenab and Lower Bari Doab Canals. Of these the Upper Chenab was opened in April 1912 and the Lower Bari Doab in April 1913 and the Upper Jhelum in December 1915. The most interesting feature of this great work is the level crossing at Balloki, 40 miles from Lahore, where the Upper Chenab canal supply is passed across the Ravi into the Lower Bari Doab Canal. The revised estimate of the cost of the whole scheme is £6¾ millions. The scheme is expected to serve an area of 1,870,000 acres annually.

Police.

The Police force is divided into District and Railway Police. The combined force is under the control of the Inspector-General, who is a member of the gazetted force and has under him three Deputy Inspector-Generals, for the Eastern (Ambala), Central (Lahore) and Western (Rawalpindi) Ranges respectively and a fourth Deputy Inspector-General in charge of Railway Police, Criminal Investigation, the Police Training School and Finger Print Bureau at Phillaur. The Railway Police are divided into two districts, Northern and Southern, each under a Superintendent. The District Police are controlled by Superintendents, each of whom is in charge of a district, and has under him one or more Assistant Superintendents. The district is divided into circles under charge of Inspectors, and again into thanas in charge of a Sub-Inspector. The staff of a thana consists on an average of one Sub-Inspector, two head constables and 10 constables. A service of Provincial Police officers has also been established consisting of 18 Deputy Superintendents, who are employed as assistants to the Superintendents. The total police force of the province exclusive of gazetted officers, consists of 980 officers and about 20,000 men, practically half of whom are armed with revolvers and bored out rifles. The village police or chaukidars are under the control of the Deputy Commissioner of each district not of the Police Superintendent. The cost of the Police Force is 62¾ lakhs.

Education.

Although the Punjab is usually considered rather a backward province, education has made great strides especially in the last ten years. Government maintain the Government College at Lahore, the Central Training College at Lahore, a Training Class for European teachers at Sanawar (Simla Hills), normal schools at the headquarters of each division, and High Schools at the headquarters of each district, and the Lawrence Military Asylum at Sanawar for European children. There are in the province nine arts colleges (one of them Oriental); 6 professional colleges for males and 1 for females; 111 High

Schools for boys and 16 for girls; 241 middle schools for boys and 43 for girls; 4,552 Primary Schools for boys and 878 for girls; 54 schools for special instruction for boys and 12 for girls. The number of pupils attending schools of all classes is 332,043 boys and 47,446 girls. The nine arts colleges are:—The Government, Oriental, Forman Christian, Dayanand, Islamia and Dayal Singh Colleges at Lahore; Khalsa, Amritsar; Murray, Sialkot; Gordon, Rawalpindi. Professional education is represented by the Law, Medical and Veterinary Colleges at Lahore, the Agricultural College at Lyallpur, the Clerical and Commercial School at Amritsar, the Engineering School at Rasul, the Mayo School of Art and the Railway Technical School, both at Lahore. There are eight Industrial Schools in the Province maintained by Municipalities or District Boards and others maintained by Missionary bodies, the Arya Samaj, etc., which receive grants-in-aid. The education of the domiciled community is provided for by a number of secondary boarding schools in hill stations and of primary schools in the plains. The aristocracy of the province is provided for by the Aitchison Chiefs' College for boys and the Queen Mary's College for girls, both at Lahore.

The Education Department is administered by the Director of Public Instruction, who has under him an Inspector of Schools in each civil division with two or more assistants, a District Inspector, with assistants, in each district, two Inspectresses of girls' schools and an Inspector of European schools. Higher education is controlled by the Punjab University (incorporated in 1882) which has the Lieutenant-Governor as *ex-officio* Chancellor, a Vice-Chancellor appointed by Government and a Senate. In addition to the nine arts colleges already mentioned and the Law and Medical Colleges at Lahore, St. Stephen's College, Delhi, and the Hindu College, Delhi, and six other colleges in Kashmir, Patiala, Bahawalpur, Kapurthala and the North-West Frontier Province are affiliated to the Punjab University.

Medical.

The Medical Department is controlled by the Inspector-General of Civil Hospitals (a member of the Indian Medical Service) who also supervises the departments of the Chief Plague Medical Officer and the Chief Malaria Medical Officer. Sanitation is controlled by the Sanitary Commissioner (also a member of the Indian Medical Service) who has under him two Deputy Sanitary Commissioners and is advised by the Sanitary Board, with the Sanitary Engineer as Technical Adviser. Medical work in the districts is in charge of the Civil Surgeons, of whom fourteen before the War were members of the Indian Medical Service and others Military Assistant Surgeons and uncovenanted Medical Officers, chiefly Civil Assistant Surgeons. The Mayo Hospital at Lahore and special railway, canal and police hospitals are maintained by Government, but the ordinary hospitals and dispensaries in the districts are maintained by municipal or district funds. Certain private institutions such as the Walker Hospital at Simla and many mission dispensaries receive grants-in-aid. The Mayo Hospital at Lahore has been greatly extended and improved as a memorial to King Edward VII, and was formally opened by Lord Hardinge in December 1915. The total number of patients treated at all hospitals and dispensaries in the year is over four and a half millions, including nearly 75,000 in-patients. A temporary department to combat plague has been organised under the Chief Medical Plague Officer. In the districts the Civil Surgeons are generally in charge of the operations against plague, but additional officers are employed from time to time. There is only one lunatic asylum in the Province at Lahore, but there are ten leper asylums. The Pasteur Institute at Kasauli performs the functions of a provincial laboratory for the Punjab. Vaccination is supervised by the Sanitary Commissioner, but is more particularly the concern of the Deputy Sanitary Commissioner, who has under him a special staff. Civil Surgeons also have a local staff of vaccinators under them.

Administration.

Lieutenant-Governor, Sir M. F. O'Dwyer, K.C.S.I. Assumed charge 1913.

PERSONAL STAFF.

Private Secretary, Lieut.-Col. E. C. Bayley, C.I.E., I.A.

Honorary Aides-de-Camp, Lieut.-Col. W. T. Wright, Hony. Capt. Ghulam Muhammad Khan; Hon. Capt. Surja, and Hon. Capt. Bishan Singh.

LEGISLATIVE COUNCIL.

President, The Lieutenant-Governor.

MEMBERS.

Nominated.

H. J. Maynard, C.S.I., I.C.S.

D. W. Aikman.

O. F. Lumsden, I.C.S.

J. A. Richey.

Col. H. Hendley, M.D., I.M.S.

H. D. Craik, I.C.S.

C. A. H. Townsend, I.C.S.

P. J. Fagan.

S. W. Gracey.

Sardar Bahadur Gajjan Singh.

Khwajah Yusuf Shah, Khan Bahadur.

Rai Bahadur Ram Saran Das, C.I.E.

J. P. Thompson.

Rai Bahadur Pandit Sheo Narayan.

Nawab Sir Bahran Khan.

E. W. Parker.

Sardar Bahadur Risaldar Partab Singh.

Elected.

J. Currie.

Lala Jowahar Lal Bhargava.

Raizada Bhagat Ram.

Sayad Makhdum Rajan Shah.

Dewan Bahadur Dewan Daulat Rai.

Bakhshi Sohan Lal of Lahore.
Malik Muhammad Amin Khan of Shamsabad.
Chaudhri Lal Chand.
Khan Saheb Mirza Ikram Ullah Khan.
Khan Bahadur Sayad Mehdi Shah.
Khan Bahadur Mian Fazl-i-Husain.

SECRETARIAT.

Chief Secretary, J. P. Thompson, I.C.S.
Revenue Secretary, H. D. Craik, I.C.S.
Financial Secretary, O. F. Lumsden.
Registrar, James Alfred Weston.

PUBLIC WORKS DEPARTMENT.

Irrigation Branch.

Secretaries, F. W. Woods; W. F. Holms.

Buildings and Roads Branch.

Secretary, D. W. Aikman, C.I.E.

REVENUE DEPARTMENT.

Financial Commissioners, H. J. Maynard, I.C.S., and P. J. Fagan, I.C.S.
Director of Agriculture and Industries, C. A. H. Townsend, B.A., I.C.S.
Director of Land Records, Inspector-Genl. of Registration, and Registrar-General, D. J. Boyd.

MISCELLANEOUS APPOINTMENTS.

Director of Public Instruction, James Alexander Richey, M.A.
Inspector-General of Police, Lieut.-Col. H. T. Dennys, I.A.
H. A. Close (N.-W. Frontier Province).
Conservator of Forests, R. McIntosh.
Inspector-General of Civil Hospitals, Colonel Harold Hendley, M.D., I.M.S.
Sanitary Commissioner, Lt.-Col. Sydney Browning Smith, D.P.H., I.M.S.
Inspector-General of Prisons, Major E. L. Ward.
Accountant-General, Jyotish Chandra Mitra, M.A., B.L.
Postmaster-General, Charles Holmes Harrison I.C.S.
Registrar of Co-Operative Credit Societies and Joint Stock Companies, H. Calvert, B.S.C.

LIEUTENANT GOVERNORS OF THE PUNJAB.

Sir John Lawrence, Bart., G.C.B.	1859
Sir Robert Montgomery, K.C.B.	1859
Donald Friell McLeod, C.B.	1865
Major-General Sir Henry Durand, K.C.S.I., C.B., died at Tonk, January 1871.	1870
R. H. Davies, C.S.I.	1871
R. E. Egerton, C.S.I.	1877
Sir Charles U. Aitchison; K.C.S.I., C.I.E.	1882
James Broadwood Lyall	1887
Sir Dennis Fitzpatrick, K.C.S.I.	1892
William Mackworth Young, C.S.I. ..	1897
Sir C. M. Rivaz, K.C.S.I.	1902
Sir D. C. J. Ibbetson, K.C.S.I., resigned 22nd January 1908.	1907
T. G. Walker, C.S.I. (*offg.*)	1907
Sir Louis W. Dane, K.C.I.E., C.S.I. ..	1908
James McCrone Douie (*offg.*)	1911
Sir M. F. O'Dwyer, K.C.S.I.	1913

Burma.

The Province of Burma lies between Assam on the North-West and China on the North-East, and between the Bay of Bengal on the West and South-West and Siam on the South-East. Its area, including the district of Putao constituted in February 1914, is approximately 270,000 square miles, of which 172,000 are under direct British Administration, 31,000 belong to independent and 67,000 to semi-independent Native States. The main geographical feature of the country is the series of rivers and hills running fan-like from North to South with fertile valleys in between, widening and flattening out as they approach the Delta. On the West are the high hills of the Chin country, Manipur and Assam, and on the East the uplands of the Shan States. On the South are the hill ranges of Siam. The country is divided East and West by the Dry Zone, which has most of the features of the highlands of India. South and North of this are the Wet Zones with a rich tropical vegetation. The climate of the Dry Zone resembles that of Behar, the temperature in May rising to 116°; the climate of the Wet Zones is moist but fairly equable. The magnificent rivers, the number of hilly ranges (Yomas) and the abundance of forests, all combine to make the scenery of Burma exceedingly varied and picturesque.

The People.

The total population of Burma at the census of 1911 was 12,115,217. Of this total, 7,642,204 are Burmans, 996,420 Shans, 919,641 Karens, 239,953 Kachins, 306,486 Chins, 344,123 Arakanese and 320,629 Talaings. There is also a large alien population of 108,877 Chinese and about 600,000 Indians, while the European population is 24,355.

The Burmans, who form the bulk of the population, belong to the Tibetan group and their language to the Tibeto-Chinese family. They are essentially an agricultural people, 80 per cent. of the agriculture of the country being in their hands. Their chief concern is with their fields and their pagodas. The interest taken by the Burmese in the course of the war, their response to the call for recruits and their generous contributions to war loans and charitable funds seem to show that their apathy towards the Government of the country is giving way to an intelligent loyalty to British rule. In appearance the Burman is usually somewhat short and thick set with Mongolian features. His dress is most distinctive and exceedingly comfortable. It consists of a silk handkerchief bound round his forehead, a loose jacket on his body and a long skirt of loongyi tied round his waist, reaching to his ankles. The Burman women, perhaps the most pleasing type of womanhood in the East, lead a free and open life, playing a large part in the household economy and in petty trading. Their dress is somewhat similar to the man's minus the silk kerchief on the head, and the loongy is tucked in at the side instead of being tied in front. A well dressed and well groomed Burmese lady would, for grace and neatness, challenge comparison with any woman in the world.

Communications.

The Irrawaddy, and to a less extent the Chindwin, afford great natural thoroughfares to the country. At all seasons of the year these rivers, especially the Irrawaddy, are full of sailing and steam craft. In the Delta, the net-work of waterways is indeed practically the only means of communication. The Irrawaddy Flotilla Company, with a fine fleet of mail, cargo and ferry boats, gives the Irrawaddy and the Delta rivers and creeks a splendid river service.

The Burma Railways Company has a length of 1,600 miles open line. The principal lines are from Rangoon to Mandalay; from Sagaing to Myitkyina, the most northern point in the system; the Rangoon-Prome line; and the Pegu-Martaban line, which serves Moulmein on the further bank of the Salween River. An important branch line runs from Thazi on the main line across the Meiktila and Myingyan Districts to Myingyan Town on the Irrawaddy. Another branch goes from Sagaing on the Irrawaddy to Alon on the Chindwin. A small branch on the Sagaing-Myitkyina line runs from Naba to Katha on the Irrawaddy. A branch on the right bank of the Irrawaddy runs from Bassein to Kyangin. A ferry at Henzada connects this branch with another branch running from Letpadan on the Prome line to the left bank of the Irrawaddy at Tharawaw. An important line, the Southern Shan States Railway, is open as far as Aungban, 7 miles beyond Kalaw, the future hill-station of the province, and 70 miles from Thazi, the junction with the Rangoon-Mandalay main line. The new line will end thirty miles further East at Yawnghwe, the principal town in the rich valley of the Nam Pilu. The Northern Shan States railway runs from Myshaung Junction, 3 miles south of Mandalay to Lashio.

The length of metalled roads is nearly 2,000 miles and of unmetalled roads nearly 11,000. The number of roads is for a rich province like Burma quite inadequate. One of the most urgent needs of the Province is a very generous extension of roads both metalled and unmetalled. The newly-constituted Committee on Roads and Communications will no doubt effect rapid improvement when funds become available. The imperial grant of 50 lakhs spread over four or five years went a very little way towards making good deficiencies, and the proposal to provide funds by means of a tax on rice exports was not approved.

Industry.

Agriculture is the chief industry of the province and supports nearly three-fourths of the population. The nett total cropped area in 1916-17 was 14,414,526 acres, but 626,553 acres were cropped twice. The estimated area irrigable is 1,691,674 acres, of which 1,272,944 acres were irrigated. The main crop is paddy, of which 2,700,000 tons were estimated to be available for export. In 1915-16 the actual exports were lower than in any of the previous nine years except 1911-12, and the price realized six crores

of rupees below the figure for 1913-14. In 1916-17, though rates for tonnage to Europe rose as high as £14 and never fell below £7-10-0, compared with an average rate of £1-5-10 for the four years preceding the war, exports of rice and paddy rose by over 50,000 tons to 2,243,204, valued at Rs. 22,16,80,000 or about two and a half crores more than in 1915-16. India took nearly half the export. Rice forms 59 per cent. of the total exports. Over 8,000 tons of cotton were produced, 106,000 tons of groundnuts, and 90,000 tons of sesamum. Maize (35,000 tons) and millet (79,000 tons) are the other chief crops.

Forests play an important part in the industrial life of the Province. The total area of reserved and unclassed forests is 142,320 square miles. Wood is extracted by lessees, of whom the Bombay-Burma Trading Corporation and Messrs. Steel Brothers are the principal. In 1914-15, Government extracted 65,000 tons of teak, while purchasers extracted 250,000 tons.

A third important branch of industry consists of working mines and quarries, in which Burma is particularly rich. The petroleum fields are in the Dry Zone, chiefly at Yenangyaung in the Magwe District where the principal extractor is the Burma Oil Company. The total output of petroleum for the Province in 1916 was 291¾ million gallons, the highest yet recorded. In the Ruby Mines District, the Burma Ruby Mines Company at Mogok produced in 1916 stones valued at £37,500. 1,982 ounces of gold were won by the Burma Gold Dredging Company from the bed of the Irrawaddy River, north of Myitkyina.

The Burma Mines Company at Bawdwin in the Northern Shan States produced 14,000 tons of argentiferous lead ores, from which were extracted lead worth over 48 lakhs and silver worth over 13¼ lakhs, and 16,000 tons of iron ore valued at Rs. 64,000. Rock tin and tin ore to the amount of 610 tons valued at .9¾ lakhs were mined in the Tenasserim division. The demand for zinc due to the opening of zinc smelting works in England caused the output of zinc ores from the Bawdwin mines to rise from 87 tons in 1915 to 3,198 tons valued at Rs. 87,000 in 1916. In Amherst district 1,000 tons of antimony ore worth Rs. 75,000 were won. The Tawmaw Mines of the Myitkyina District produced 189 tons of jade, valued at Rs. 1·4 lakhs.

Tungsten ores, chiefly wolfram, are mined in Tavoy, Mergui and the Southern Shan States. Burma is the chief source of the world supply of these ores. Special measures were taken by Government to encourage the output in consequence of the need of wolfram for purposes connected with the war. These measures included the appointment of special officers and the importation of labour from China and India. The output rose from 2,545 tons valued at Rs. 42.65 lakhs in 1915 to 3679 tons valued at Rs. 72.94 lakhs in 1916. The full effect of the measures taken to improve communications and facilitate output in the mining area has not yet been felt.

The area under rubber increased during the year 1916-17 by 1,414 acres to 59,257 acres. The plantations are young and as the trees come into bearing production increases rapidly. The exports of rubber have more than doubled in two years and in 1916-17 exceeded 1,000 tons. But the planting of new ground is not on a scale to meet the demands for rubber, and Government has endeavoured by free grants of suitable land to stimulate planting. On this as on other industries of Burma the mischievous activities of the company promoter during the great "boom" cast a blight from which it is only just recovering. The bulk of the rubber is grown in Tenasserim division, but there are large plantations near Rangoon and in the wet zone of Upper Burma near Myitkina.

Manufactures.

There are 493 factories, 311 of which are engaged in milling rice and 110 are sawmills. The remainder are chiefly cotton ginning mills, oil mills for the extraction of oil from groundnuts, and oil refineries connected with the petroleum industry. The average daily number of operatives rose from 66,352 in 1915 to 68,632 in 1916. The increase was chiefly in rice-mills. At the Census of 1911, 469,742 or only 6·6 of the total population were engaged outside agriculture and production.

As is the case in other parts of the Indian Empire, the imported and factory-made article is rapidly ousting the home-made and indigenous. But at Amarapura in the Mandalay District, a revival has taken place of hand silk-weaving. Burman wood-carving is still famous and many artists in silver still remain, the finish of whose work is sometimes very fine. Bassein and Mandalay parasols are well known and much admired in Burma. But perhaps the most famous of all hand-made and indigenous industries is the lacquer work of Pagan with its delicate patterns in black, green and yellow traced on to a ground-work of red lacquer over bamboo. A new art is the making of bronze figures. The artists have gone back to nature for their models, breaking away from the conventionalized forms into which their silver work had crystallized, and the new figures display a vigour and life that make them by far the finest examples of art the province can produce.

Trade.

The total value of the foreign trade in 1916-17 was 3,139 lakhs, an increase of 18 per cent. compared with the previous year but 850 lakhs below the returns for the best year before the war. Imports amounted to 1,185 lakhs or 9 per cent. more than in the previous year. Rangoon, the only port with facilities for distribution, took 89·97 per cent. of the foreign trade and 82·47 of the Indian trade. Indian trade rose from 2,631 to 2,805 lakhs. The net customs duty was 165¾ lakhs or 26 per cent. more than in 1915-16. The shortage of shipping and the enormous cost of freight continued to hamper trade. Only articles of export required for war purposes such as lead, wolfram, rubber and cotton, shew any marked increase. The exports of rice and paddy to foreign countries totalled 1,215,277 tons, 25 per cent. more than in the previous year, but over 40 per cent. less than in 1912-13. Increase of prices accounts for a considerable part of the increase of total trade, but after allowances have been made for

the inflation of prices it is clear that there was a great recovery during the year.

The most important item of merchandise imported into Rangoon is manufactures of cotton, which account for 32 per cent. of the total import trade. These imports are valued at Rs. 376 lakhs. In 1915-16 the United Kingdom took 44 per cent. and the rest of the British Empire 26 per cent. of the total import and export trade of the province.

Administration.

In 1897 the Province, which had formerly been administered by a Chief Commissioner, was raised to a Lieutenant-Governorship. The head of the Province is therefore now the Lieutenant-Governor. He has a Council of seventeen members, one of whom is elected by the Burma Chamber of Commerce, one by the Rangoon Trades Association and the remaining fifteen are nominated by the Lieutenant-Governor. Not more than seven members may be official; the rest must be non-officials and at least four must be selected from the Burmese population, one from the Indian and one from the Chinese community.

Burma is divided administratively into Upper Burma (including the Shan States and Chin Hills) and Lower Burma. The Shan States are administered by the Chiefs of the States, subject to the supervision of the Superintendents in the case of the Northern and Southern Shan States, and to the supervision of the Commissioners of the adjoining Divisions in the case of the other States. The Civil, Criminal and Revenue administration is vested in the Chief of the State, subject to the restrictions contained in the sanad. The law administered is the customary law of the State.

The Chin Hills are administered by a Superintendent.

Under the Lieutenant-Governor are eight Commissioners of divisions, four in Upper and four in Lower Burma. Commissioners in Upper Burma and the Commissioner of the Arakan Division are ex-officio Sessions Judges, but the other three Commissioners have been relieved of all judicial work.

Under the Commissioners are 40 Deputy Commissioners including the Police officers in charge of the Hill Districts of Arakan and the Salween District, who exercise the powers of Deputy Commissioner. Deputy Commissioners are also District Magistrates, Collectors, and Registrars, except in Rangoon, where there is both a District Magistrate and a Collector. Subordinate to the Deputy Commissioner are Assistant Commissioners, Extra Assistant Commissioners and township officers, called Myooks. In the villages are the village headmen, thugyis, assisted in Lower Burma by the Seeingaungs (rural policemen in charge of ten houses). The revenue administration is controlled by a Financial Commissioner assisted by two Secretaries. Subordinate Departments are in charge of a Commissioner of Settlements and Land Records, a Director of Agriculture, a Superintendent of the Civil Veterinary Department and a Registrar of Co-operative Credit Societies.

Justice.

The administration of Civil and Criminal Justice is under the control of the Chief Court of Lower Burma with five judges, and of the Judicial Commissioner, Upper Burma, with an Assistant Judicial Commissioner. There are seven Divisional and eight District Judges. There are also separate Provincial and Subordinate Judicial Services. Divisional Judges are also Sessions Judges. The Chief Court at Rangoon is the highest Civil Court of appeal and the highest court of Criminal appeal and revision in Lower Burma. It is also the High Court for the whole of Burma (including the Shan States) where European British subjects are concerned. It is the principal Civil and Criminal Court of original jurisdiction for Rangoon Town and hears appeals from all sentences of Courts and magistrates exercising jurisdiction in Rangoon Town.

In Criminal and Civil matters the Judicial Commissioner of Upper Burma exercises the power of a High Court for appeal, reference and revision, except in respect of criminal cases in which European British subjects are concerned.

All village headmen have limited Magisterial powers and a considerable number are also invested with civil jurisdiction to a limited extent.

In pursuance of the policy of decentralization steps were taken in 1917 to restore to the village headmen the power and influence which they possessed in Burmese times before the centralizing tendencies of British rule made them practically subordinate officers of the administration.

Municipalities.

The Rangoon Municipality is the most important, with an income of Rs. 44·19 lakhs and an expenditure of Rs. 45·27 lakhs. The Chairman is a member of the Indian Civil Service of Deputy Commissioner's rank. The members of the Committee are elected by wards.

There are 44 minor Municipalities, of which the most important are those at Mandalay and Moulmein. The average incidence of Municipal taxation is Rs. 2-9-5, but in Rangoon it reaches Rs. 11-11-9.

Local Funds.

No Local Boards or District Boards exist in Burma. In their place in Lower Burma there are District Cess Funds, derived mostly from a 10 per cent. cess on collections of ordinary local revenue and from collections from markets, ferries, slaughter houses, etc. The total receipts amount to 35·44 lakhs.

In Upper Burma, there are District Funds. They are derived from market, ferry and license fees and occasional grants from Provincial revenues. The total revenue was 9·34 lakhs.

The decrease of over three lakhs compared with the previous year is due to the fact that in that year Provincial Funds contributed over four lakhs for the construction of roads.

There are 7 Cantonment Funds, 19 Town Funds and, excluding the Rangoon Port Trust, 6 Port Funds.

Finance.

As in the case of all other Provinces, the finances of Burma are based on a "Provincial Settlement." In the case of Burma, it came into force on the 1st April 1907, and the Government of India retains in the first place the entire profits of the commercial departments, such as Posts and Telegraphs, and in the second place, all the revenue where the 'locale' is no guide to its true incidence, such as the net receipts from Customs, Salt and Opium. But as the income from these sources is inadequate for the purpose of meeting the cost of the Imperial Services, special arrangements are made as with other Provinces for the division of the remaining sources of revenue between Imperial and Provincial Funds.

In 1910-1911, as a result of the Report of the Decentralisation Committee, modifications were introduced into the Settlement. Briefly, the Local Government retains 5-8ths of the net Land Revenue instead of a half, and the whole of the net Forest revenue. The following figures show the gross revenue and expenditure for 1915-16:—

	Receipts. Rs.	*Expenditure.* Rs.
Imperial ..	365·24 lakhs	72·40 lakhs
Provincial ..	554·32 „	564·05 „
District Funds	44·78 „	53·12 „
Municipalities .	101·54 „	112·29 „
Other Funds	76·35 „	74·06 „

The Imperial Government makes a fixed annual assignment to the Burma Government. Under the settlement of 1911 this assignment was fixed at Rs. 12,90 lakhs. The total contributions from Imperial Funds during the year 1917-18 amounted to Rs. 46.93 lakhs. From April 1st, 1915, onwards the Government of India has allotted an additional recurring grant of Rs. 15·11 lakhs to the province, and has further guaranteed to the province a minimum aggregate of revenue advancing by Rs. 8 lakhs annually until 1923-24. No payments under this guarantee will be made till after the war but it will have retrospective effect from the year 1911-12.

Public Works.

This Department is administered by two Chief Engineers who are also Secretaries to Government in the Public Works Department. There are eight Superintending Engineers (including one for Irrigation and a Sanitary Engineer), 83 Executive Engineers and Assistant Engineers. A Consulting Architect is attached to Head Quarters.

There are four Major Irrigation Works—Mandalay, Shwebo and Mon Canals and the Ye-U canal in the Shwebo District.

Police.

The Police Force is divided into Civil, Military and Rangoon Town Police. The first two are under the control of the Inspector-General of Police, the latter is under the orders of the Commissioner of Police, Rangoon, an officer of the rank of Deputy Inspector-General.

There are four other Deputy Inspectors-General, one each for the Eastern and Western Range, one for the Railway and Criminal Investigation Department and one for the Military Police.

The sanctioned strength of the Civil Police Force at the end of 1916 was 1,363 officers, and 14,378 men, but the numbers were 42 officers and 590 men short of the sanctioned strength. The strength of the Military Police on the 1st January 1917 was 16,421 officers and men. The Rangoon Town Police stand at 102 officers and 1,246 men.

A special feature of Burma is the Military Police. Its officers are deputed from the Indian Army. The rank and file are recruited from natives of India with a few Kachins, Karens and Shans. The experiment of recruiting Burmese on a small scale has been successful. The organisation is military, the force being divided into battalions. The object of the force is to supplement the regular troops in Burma. Their duties, apart from their military work, is to provide escorts for specie, prisoners, etc. and guards for Treasuries, Jails and Courts. During the year 1916 the Military Police furnished 2,641 volunteers who were drafted into Indian regiments on active service, making 5,214 since war began. This number has been raised to over 7,000 in 1917.

Education.

At the head is the Director of Public Instruction with an Assistant Director. There are 6 Inspectors of Schools belonging to the Imperial and one belonging to the Provincial Service, and 7 Assistant Inspectors belonging to the Provincial Service. The Rangoon College is staffed by a Principal and nine Professors drawn from the Imperial Service with three from the Provincial Service. Outside the Education Department is the Educational Syndicate, which holds certain examinations and serves as an advisory body on educational questions referred to it by Government. A system of Divisional Boards for the management of vernacular education has been sanctioned.

Pending the establishment of the Burma University at the end of the war, the Rangoon College and the Baptist College are affiliated to the Calcutta University. Under Government there are—

An Arts College, Law School, Reformatory School; School of Engineering, Apprentice School, High School for Europeans, High School at Taunggyi for the sons of Shan Chiefs, 5 Normal Schools, 16 Anglo-Vernacular High Schools, 21 Anglo-Vernacular Middle Schools, and 60 Vernacular Schools.

Aided Schools, managed chiefly by Christian Missions, include 32 European Schools, 7 Normal Schools and 110 Anglo-Vernacular High and Middle Schools. The number of schools managed by Buddhist Societies is steadily increasing.

A remarkable feature of education in Burma is the system of elementary education evolved, generations ago, by the genius of the people. Nearly every village has a monastery (hpoongyi kyaung); every monastery is a village school and every Burman boy has, according to his religion, to attend that school, shaving his head and for the time wearing the yellow robe. At the hpoongyi-kyaungs the boys are taught to read and write and an elementary and native

system of arithmetic. The result is that there are very few boys in Burma who are not able to read and write and the literacy of Burman men is 412 per mille.

Of these Monastic Schools 3,418 are registered under the grant in aid rules, receive Government aid, according to the Code and are regularly inspected.

Another feature of education in Burma is the excellent work of the American Baptist Mission, which has established schools in most of the important towns in Burma, as well as a College in Rangoon.

The Imperial Idea Commission which sat in 1916-17 drew attention to the fact that considerably more than half the A. V. Schools in the province are controlled by Missions and nearly half by foreign agencies.

Medical.

The control of the Medical Department is vested in an Inspector-General of Civil Hospitals. Under him are 41 Civil Surgeons. There is also a Sanitary Commissioner, two Deputy Sanitary Commissioners, an Inspector-General of Prisons, three whole time Superintendents of Prisons, a Chemical Examiner and Bacteriologist and a Superintendent of the Lunatic Asylum.

A Civil Surgeon is in charge of each District, while at the summer Head Quarters of Maymyo there is a special Civil Surgeon.

The total number of Hospitals and Dispensaries was 282 at the end of March 1916. The Rangoon General Hospital is perhaps the finest in the East.

The Pasteur Institute was opened in Rangoon in July 1915. The Director is a Senior Member of the Indian Medical Service.

The total number of patients treated in 1916 was 2,110,548

The expenditure on hospitals and dispensaries in 1916 was 18·73 lakhs, of which sum Rs. 60,800 only were subscriptions and donations.

Administration.

Lieutenant-Governor, Sir Reginald Craddock.
Private Secretary, T. Lister, B.A., I.C.S.
Aide-de-Camp, Lieut. M. B. D. Whiteside.
Honorary Aides-de-Camp, Captain S. D. Vale Lt.-Col. H. B. Huddleston, Lt.-Col. J. W. William ffrench-Mullen, C.I.E.

Indian Aides-de-Camp, Hony. Capt. Muzaffar Khan, *Sardar Bahadur*; Hon. Capt. Amar Singh, *Rai Bahadur*. Subadar Maung Aung Bevin.

LEGISLATIVE COUNCIL OF THE LIEUTENANT-GOVERNOR.

Officials.

W. J. Keith.
Lt.-Col. E. C. Townsend.
H. Thompson.
J. G. Rutledge, M. A.
Charles M. Webb, I.C.S.
Bertram Sansmarez Carey.
C. H. Wollaston.

Non-Officials.

Merwanjee Cowasjee.
Lim Chin Tsong.
Sir Sao Mawng, C.I.E.
Abdul Karim Abdul
Shakur Jamal C.I.E.
Francis Foster Goodliffe.
Maung Po Tha.
Dr. San Ciombic Po, M.D.
E. O. Anderson.
J. E. Du Bern.
Maung Nyun.

SECRETARIAT.

Chief Secretary, C. M. Webb.
Revenue Secretary, W. J. Keith.
Secretary, P.W.D., C. H. Wollaston.
Officiating Joint Secretary, P. W. D., H. E. W. Martindell.
Financial Commissioner, H. Thompson.
Officiating Senior Registrar, S. C. Buttery.

Miscellaneous Appointments.

Settlement Commissioner and Director of Land Records, R. E. V. Arbuthnot.
Director of Agriculture, H. Clayton.
Consulting Architect, T. O. Foster, F.R.I.B.A.
Superintendent and Political Officer, Southern Shan States, G. C. B. Stirling.
Superintendent and Political Officer, Northern Shan States, H. A. Thornton.
Director of Public Instruction Samuel William Cocks, M. A.
Inspector-General of Police, Lt.-Col. H. Des Voeux.
Chief Conservator of Forests, C. G. Rogers.
Inspector-General of Civil Hospitals, Col. Percy Charles Hutchinson Strickland.
Sanitary Commissioner, Lt.-Col. C. E. Williams.
Inspector-General of Prisons, Major H. H. G. Knapp.
Commissioner of Excise, Lieut.-Colonel T. L. Ormiston.
Chief Customs Authority, Herbert Thompson.
Accountant-General, F. Dukoff Gordon.

Chief Commissioners of Burma.

Lieut.-Colonel A. P. Phayre, C.B. ..	1862
Colonel A. Fytche, C.S.I.	1867
Lieut.-Colonel R. D. Ardagh	1870
The Hon. Ashley Eden, C.S.I.	1871
A. R. Thompson, C.S.I.	1875
C. U. Aitchison, C.S.I.	1878
C. E. Bernard, C.S.I.	1880
C. H. T. Crosthwaite	1883
Sir C. E. Bernard, K.C.S.I.	1886
C. H. T. Crosthwaite, C.S.I.	1887
A. P. MacDonnell, C.S.I. (*a*)	1889
Alexander Mackenzie, C.S.I.	1890
D. M. Smeaton	1892
Sir F. W. R. Fryer, K.C.S.I.	1895

(*a*) Afterwards (by creation) Baron MacDonnell.

Lieutenant-Governors of Burma.

Sir F. W. R. Fryer, K.C.S.I.	1897
Sir H. S. Barnes, K.C.S.I., K.C.V.O. ..	1903
Sir H. T. White, K.C.I.E.	1905
Sir Harvey Adamson, Kt., K.C.S.I., LL.D.	1910
Sir Harcourt Butler, K.C.S.I., C.I.E. ..	1915
ir Reginald Craddock	1917

Bihar and Orissa.

Bihar and Orissa lies between 19°-02′ and 27°-30′ N. latitude and between 82°-31′ and 88°-26′ E. longitude and includes the three provinces of Bihar, Orissa and Chota Nagpur, and is bounded on the north by Nepal and the Darjeeling district of Bengal; on the east by Bengal and the Bay of Bengal; on the south by the Bay of Bengal and Madras; and on the west by the United Provinces of Agra and Oudh and the Central Provinces.

The area of the British territories which constitute the Lieutenant-Governorship of Bihar and Orissa is 83,181 square miles inclusive of the area of large rivers. In addition to the districts which are directly under British rule, there are two groups of petty States which lie to the south and south-west of the Province and which under the names of the Tributary and Feudatory States of Orissa and the Political States of Chota Nagpur are governed each by its own Chief under the superintendence and with the advice of the Commissioner of the nearest British Administrative division assisted, in the case of the Orissa States, by a Political Agent. The area of these territories is 28,648 square miles and as it is usual to include them when speaking of Bihar and Orissa the area of the whole Province may be stated at 111,829 square miles. Two of the provinces of the Lieutenant-Governorship of Bihar and Orissa, *viz.*, Bihar and Orissa, consist of great river valleys, the third, Chota Nagpur, is a mountainous region which separates them from the Central Indian Plateau. Orissa embraces the rich deltas of the Mahanadi and the neighbouring rivers and is bounded by the Bay of Bengal on the south-east and walled in on the north-west by the hilly country of the Tributary States. Bihar lies on the north of the Province and comprises the valley of the Ganges from the spot where it issues from the territories of the Lieutenant-Governor of the United Provinces of Agra and Oudh till it enters Bengal near Rajmahal. Between Bihar and Orissa lies Chota Nagpur. Following the main geographical lines there are five Civil Divisions with head-quarters at Patna, Muzaffarpur (for Tirhut), Bhagalpur, Cuttack (for Orissa) and Ranchi (for Chota Nagpur).

The People.

The temporary head-quarters of Government are at Ranchi in Chota Nagpur, while the permanent Capital at Patna is nearing completion, the *High Court* and Government House being already occupied while the Secretariat building is almost complete. The new capital which lies betw en the Mili ary Cantonment of Dinapore and the old civil station of Bankipore is known as "Patna", the old town being called Patna City." The Province has at present no hill station.

The Province has a population of 38,435,293 persons which is very little less than that of France and rather more than that of the Bombay Presidency. The province is almost entirely rural, no fewer than 966 per mille of the population living in villages. Even so with 344 persons per square mile, Bihar and Orissa is more thickly populated than Germany. There are only three towns which can be classed as cities, namely, Patna, Gaya and Bhagalpur. During the last thirty years the population of Patna, the capital designate, has been steadily diminishing. Hindus form an overwhelming majority of the population. Though the Muhammadans form less than one-tenth of the total population they constitute more than one-fifth of urban population of the province. Animists account for 7 per cent. These are inhabitants of the Chota Nagpur plateau and the Santal Parganas, the latter district being a continuation of the plateau in a north-easterly direction.

Industries.*

The principal industry is agriculture, Bihar, more especially North Bihar, being the "Garden of India." Rice is the staple crop but the spring crops, wheat, barley, and the like are of considerable importance. It is estimated that the normal area cultivated with rice is 15,615,100 acres or 48 per cent. of the cropped area of the Province. Wheat is grown on 1,121,800 million acres, barley on 1,411,800 acres, maize or Indian-corn on 1,634,600 acres, the latter being an autumn crop. Oilseeds are an important crop, the cultivation having been stimulated by the demand for them in Europe. The exports in various kinds of oilseeds amounted in 1915-16 to 3,622,788 maunds valued at Rs. 1,68,96,484. It is estimated that 1,932,300 acres of land are annually cropped with oil-seeds in the Province. There is irrigation in Shahabad, Gaya, Champaran and Muzaffarpur districts in Bihar and in Balasore and Cuttack in Orissa. The Indigo industry had before the war been steadily on the decline, the total area sown having decreased from 342,000 acres in 1896 to 109,600 acres in 1911. The principal cause of this was the discovery of the possibilities of manufacturing synthetic or chemically prepared indigo on a commercial scale, a process chiefly carried out in Germany. Owing, however, to the stoppage of supplies from Germany the value of natural indigo has risen enormously and the area under cultivation has also risen from 3-,500 to 60,800 acres and the total yield has increased from 8,181 factory maunds to 10,584. In the district of Purnea and in Orissa, and parts of the Tirhut Division jute is grown, but the acreage varies according to the price of jute. Thus in 1914-15 330,00 acres were under cultivation, in 1915-16 only 188,100. All the districts of Bihar, with the excepti n of Purnea, are liable to famine. The last serious famine was in 1~95-96. In any year in which monsoon currents from either the Bay of Bengal or the Arabian Sea are unduly late in their arrival or cease abruptly before the middle of September the agricultural situation is very grave. It may be said that for Bihar the most important rainfall is that known as the *hatia*, due towards the end of September or up to middle of October. Rain at this time not only contributes materially to an increased outturn of the rice crop, but also provides the moisture necessary for starting the spring or *rabi* crops.

* The figures given in this paragraph relate to British territory only.

Manufactures.

Opium was formerly, with indigo, the chief manufactured product of Bihar, but in consequence of the agreement with the Chinese Government the Patna Factory has been closed. At Monghyr the Peninsular Tobacco Company have erected one of the largest cigarette factories in the world and as a result tobacco is being grown much more extensively. There are two important iron works in the Singhbhum District. Messrs. Tata & Co.'s Iron and Steel Works at Sakchi and the Bengal Iron and Steel Company at Dhulia. Both these works possess considerable economic possibilities and are likely to have a far reaching effect on the iron and steel trade of India in the future. The Cape Copper Co. are aslo opening up copper mines at the Rakha Hills in the same district. The amount of Copper Ore extracted in 1915-16 was 8,010 tons. But by far the most important of the mineral industries in the province is that concerned in the raising of coal. The coalfields in the Manbhum District have undergone an extraordinary development in the past twenty years. The importance of the industry may be said to date from the opening of the railway from Barakar to Dhanbad and Katras in 1894. In 1894 the outturn of all the mines in the district was only 126,686 tons; in 1895 it rose to 1,281,294 tons, the enormous increase being almost entirely from the Jharia field. In the two succeeding years there was a set back, but from 1898 there was a steady rise in the outturn which first touched two million tons in 1901. In 1905 the outturn had swelled to nearly three million ton and in 1906 to nearly four millions; in 1907 over 5,800,000 tons were raised and in the following year no less than seven million tons. By 1914-15 the production of Indian coal had been raised to 16,464,000 tons valued at Rs. 586 lakhs. Of this total 56 per cent. was raised in the Jharia fields and 30 per cent. from the Raniganj coal fields of Bengal. The entrance of the Bengal-Nagpur Railway into the Jharia field in 1904, and the subsequent extension of various small loops and branches, besides innumerable sidings from both systems, the doubling of the line from Barakar to Dhanbad and the opening of the section of the Grand Chord of the East Indian Railway from Dhanbad to Gomoh have all contributed to this rapid development. Giridih in Hazaribagh is also the centre of a considerable coal-mining industry containing, as it does, mines owned and worked by the East Indian Railway Company. The Bokaro-Ramgarh field in the same district is likely to be of great economic importance as soon as the area is fully opened up by the railway now under construction. It immediately adjoins the Jharia field across the Hazaribagh border. There is a large undeveloped coal supply, it is believed, in the Districts of Palamau and Hazaribagh. There are now 354 coal mines in this Province with an output of 10,711,356 tons. The war has demonstrated the great value of the mica mines in Hazaribagh and Gaya which are now entirely controlled by Government.

Administration.

The Province is administered by a Lieutenant Governor in Council. The Lieutenant-Governor is appointed by the Crown and is a senior member of the Indian Civil Service. He is assisted by a Council of three members, two of whom are drawn from the Indian Civil Service, while the third, in practice, is an Indian. Each member takes charge of certain departments and in the event of any difference of opinion regarding inter-departmental references the matter is decided in Council. In practice all important cases are submitted through the member concerned to the Lieutenant-Governor.

The unit of executive administration is the District. The District Officer is styled District Magistrate and Collector, except in the Scheduled districts where he is known as the Deputy Commissioner. The ordinary district jails are placed in charge of a Superintendent, usually the Civil Surgeon, while the Magistrate pays periodical visits of inspection. All District Officers are *ex-officio* Registrars; and as *ex-officio* Chairmen of the District Boards they have control over primary education and are charged with the execution and administration of all local public works. In a word, the District Officer is the executive chief and administrator of the tract of country committed to him. As District Magistrate he is also local head of the magistracy and, as such, competent to try all cases, except the more important which are sent for trial at the Sessions, but except in the Scheduled districts he seldom presides in Court, and his share in this part of the administration is practically confined to the distribution of work, the hearing of petty appeals and the general superintendence of his subordinates. The latter combine revenue with magisterial functions and as Deputy Collectors exercise under his control many of the powers of a Collector. The police, by whose aid he carries on the criminal administration, have as their local superior a Superintendent, who in all matters, except those concerning the discipline and internal economy of the force, has to carry out such instructions as he receives from the District Magistrate. The Sub-divisional Officers, who are Joint, Assistant and Deputy Magistrates in charge of portions of districts, occupy, to a great extent, in their own jurisdictions, the position of the District Officer, except in respect of the police, over whom they have only judicial and no executive control. There are 21 Districts.

Above the District Magistrates are the Divisional Commissioners. Their duties are principally those of supervision. In almost all matters they exercise a general superintendence, and especially in the Revenue Department they control the Collectors' proceedings. Commissioners are the channels of communication between the local officers and Government, sifting, collating and bringing together in a compact form the information they receive. In revenue cases the Commissioner forms a Court of appeal and in this and similar matters is subject to the orders of the Board of Revenue. With this exception he is in subordination to Government direct.

The Civil Secretariat consists of the Chief Secretary, who is in charge of the Political Appointment and Education Departments; the Revenue and Judicial Secretary, the Financial and Municipal Secretary and their three Under Secretaries.

Finance.

The Province of Bihar and Orissa was formed with five divisions, detached from the old province of Bengal with effect from the 1st April 1912. The old arrangements made with the Government of Bengal regarding the financial administration of the Province therefore ceased to apply from that date. A fresh arrangement has, however, been made, with the approval of the Secretary of State. As the method adopted was in some measure tentative and provisional, a temporary settlement for a period of three years only has been effected. Owing to the war it has been found necessary to continue the provisional settlement for the present. Under the terms of this settlement the whole of the receipts under the heads of Interest, Forest, Registration, Courts of Law, Jails, Police, Ports and Pilotage, Education, Medical and superannuation receipts have been made over entirely to the local Government together with their corresponding charges. In addition to these, it receives three-fourths of the receipts from excise, the whole of the Land Revenue collected from Government Estates, one-half of the receipts under all other sub-heads excepting recoveries from zamindars and raiyats on account of survey and settlement in Bihar and other similar special surveys and the whole of the receipts under Scientific and other Minor Departments.

The only expanding items of revenue are Excise and Stamps. The Provincial Budget for 1917-18 shows an opening balance of Rs. 1,43,64,000. Receipts Rs. 3,12,74,000, Expenditure Rs. 3,37,74,000, Closing Balance Rs. 1,18,64,000. The reduction in the balance is primarily due to the construction of the new capital at Patna.

Public Works.

The Public Works Department in the Province of Bihar and Orissa consists of two branches, *viz* :—(1) Roads and Buildings, and (2) Irrigation and Marine, which also deals with railways. Each branch has a Chief Engineer, who is also Secretary to the Local Government with an Engineer Officer as Under Secretary under him. There is also a non-professional Assistant Secretary, a Consulting Architect and a Sanitary Engineer, who works under a Sanitary Board. The electrical work of the Province is carried out by an Electrical Inspector and a staff of subordinates.

The Roads and Buildings Branch consists of two Circles in charge of two Superintending Engineers who control the Public Works Divisions held by the Executive Engineers for the execution of Imperial and Provincial works. The Superintending Engineers are also the Inspectors of Works under the Local Self-Government Act in respect of all local works of the District Boards and, in this capacity, are the professional advisers of the Chairmen and of the Divisional Commissioners who control the operation of the Boards. They also supervise all works carried out by the District Boards.

The Irrigation branch is composed of three Circles, each of which is in charge of a Superintending Engineer. In the Irrigation Circles, the Executive Engineers carry out the works of the Roads and Buildings Branch, within the limits of their divisions, in addition to their irrigation duties. The Superintending Engineers of Irrigation Circles also act as Inspectors of Works in regard to local works in the districts in their Circles. In the Sone and Orissa Circles there are two Revenue Divisions under Deputy Collectors who deal with the assessment and collection of waterrates on the Orissa and Sone Canals under the control of the Superintending Engineers.

Justice.

The administration of justice is controlled by the High Court of Judicature recently established at Patna. In the administration of civil justice below the High Court are the District Judges as Courts of Appeal, the Subordinate Judges and the Munsiffs. The jurisdiction of a District Judge or Subordinate Judge extends to all original suits cognizable by the Civil Courts. It does not, however, include the powers of a Small Cause Court, unless these be specially conferred. The ordinary jurisdiction of a Munsif extends to all suits in which the amount or value of the subject matter in dispute does not exceed Rs. 1,000 though the limit may be extended to Rs. 2,000. On the criminal side the Sessions Judge hears appeals from Magistrates exercising first class powers while the District Magistrate is the appellate authority for Magistrates exercising second and third class powers. The District Magistrate can also be, though in point of fact he very rarely is, a court of first instance. It is usual in most districts for a Joint Magistrate or a Deputy Magistrate to receive complaints and police reports, cases of difficulty or importance being referred to the District Magistrate who is responsible for the peace of the district. In the non-regulation districts the Deputy Commissioner and his subordinates exercise civil powers and hear rent suits.

Local Self-Government.

Bengal Act III of 1884, which regulates the constitution, powers and proceedings of Municipal bodies in this Province has been amended by the Bengal Acts IV of 1894 and II of 1896. By these enactments the elective franchise has been further extended, and now provides for the establishment and maintenance of veterinary institutions and the training of the requisite staff, the improvement of breeds of cattle, the training and employment of female medical practitioners, the promotion of physical culture, and the establishment and maintenance of free libraries. The Commissioners may order a survey and organise a fire brigade, they may control the water-supply when its purity is suspected, even to the extent of interference with private rights, larger powers of precaution are conferred in the case of ruined and dangerous houses and other erections, as well as increased optional powers for the general regulation of new buildings. It is proposed to introduce shortly in the Provincial Legislative Council a new Municipal Bill, which will supersede the Bengal Acts, which are now out of date in several particulars.

The total number of Municipalities at present in existence is 55. The ratepayers of 49 Municipalities have been granted the privilege of electing two-thirds of the number of Commissioners fixed in each case, whilst in 34 cases the

Commissioners are authorised to elect their own Chairman. In the remaining towns Government has reserved to itself the power of appointing the Commissioners or Chairman, as the case may be, owing either to the backwardness of the place or to the necessity for holding the balance against contending interests or strong party feeling. It is only in 4 towns, however, that Government exercises complete control in the appointment of both Commissioners and Chairmen.

The total receipts of Municipalities including grants from the Local Government and the opening balance, total in 1915-16 Rs. 46,35,116 and the disbursements Rs. 36,01,352 leaving a closing balance of Rs. 10,63,764, a large portion of which is earmarked for improvements in the Patna City Municipality.

Apart from Municipalities, each district with the exception of the Santal Parganas, Angul and Singhbhum has a District Board constituted under Bengal Act III of 1885. Municipal areas are excluded in accordance with the provisions of section 1. Local Boards have been formed in all of these districts where there are sub-divisions, except Ranchi. There are at present 18 District Boards, 45 Local Boards, and 23 Union Committees in the Province.

In accordance with the provisions of section 7 of the Act, a District Board is to consist of not less than 9 members. Local Boards are entitled to elect such proportion (as a rule one-half) of the whole of the District Board as the Lieutenant-Governor may direct. In districts where there are no Local Boards, the whole of the members are appointed by Government. The Chairman of the District Board is appointed by Government; he is in practice always the Magistrate of the district.

Owing to the surrender by the Government of the Public works cess to the District Boards the latter are now wealthy local bodies, the total income being nearly 83 lakhs, of which 16 lakhs were spent on education and 7 lakhs on medical relief in 1915-16.

Land Tenures.

Estates in the Province of Bihar and Orissa are of three kinds, namely, those permanently settled from 1793 which are to be found in the Patna, Tirhut and Bhagalpur divisions, those temporarily settled as in Chota Nagpur and parts of Orissa, and estates held direct by Government as proprietor or managed by the Court of Wards. The passing of the Bengal Tenancy Act (VIII of 1885) safeguarded the rights of the cultivators under the Permanent Settlement Act. Further, the Settlement Department under the supervision of the Director of Land Records makes periodical survey and settlement operations in the various districts, both permanently and temporarily settled. In the former, the rights of the under tenants are recorded and attested, while in the latter there is the re-settlement of rents. In the re-settlement proceedings, rents are fixed not only for the landlords but also for all the tenants. A settlement can be ordered by Government on application made by raiyats.

The tenures of Orissa are somewhat different. Under the zamindars, that is, the proprietors who took settlement from Government and pay revenue to Government direct, is a class of subordinate proprietors or proprietary tenure holders, who were originally village headmen, dealing more or less direct with the revenue authorities. They have a variety of names, such as *mukadam, padhan, maurusi, sarbarakar, pursethi, khariddar* and *shikmi* zamindar. These sub-proprietors or proprietary tenure holders pay their revenue through the zamindars of the estates within which their lands lie. In Chota Nagpur, Orissa and the Santal Parganas, the rights of village headmen have been recognised. The headman collects the rents and is responsible for them minus a deduction as remuneration for his trouble.

Both Orissa and Chota Nagpur have their own Tenancy Acts.

Police.

The Departments of Police, Prisons and Registration are each under the general direction of Government, supervised and inspected by an Inspector-General with a staff of assistants. The Commissioner of Excise and Salt is also Inspector General of Registration.

Under the Inspector-General of Police are three Deputy Inspectors-General and 27 Superintendents. There are also 27 Assistant Superintendents of Police and 15 Deputy Superintendents. The force is divided into the District Police, the Railway Police and the Military Police. A Criminal Investigation Department has also been formed for the collection and distribution of information relating to professional criminals and criminal tribes whose operations extend beyond a single district and to control, advise, and assist in investigations of crime of this class and other serious cases in which its assistance may be invoked. There are two companies of Military Police which are maintained as reserves to deal with serious and organised disturbances and perform no ordinary civil duties. The work of the Railway Police is practically confined to offences actually committed on the railways, but they are under the control of the Deputy Inspector-General of the Criminal Investigation Department, and an important part of their duties is to co-operate with the District Police in watching the movements of bad characters by rail. The prevention and detection of crime in the Province generally is entrusted to the District Police. In that work they are assisted by the rural police, known as chaukidars and dafadars, who form no part of the regular force, but are under a statutory obligation to report all cognizable crime at the police station, and generally to assist in the prevention and detection of crime. They are not whole-time servants of Government, but they are paid a small monthly salary which is realized from the villagers by the panchayat. The cost of the police in 1916-17 was Rs. 47,66,000.

Education.*

The Department of Public Instruction is controlled by a Director. There are 6 Divisional Inspectors of Schools, of whom one inspects

* The figures given in this paragraph relate to British territory only.

European Schools in addition to his other duties, 5 Assistant Inspectors, 5 Special Officers for Muhammadan Education, 26 Deputy Inspectors, 194 Sub-Inspectors, 30 Assistant Sub-Inspectors and 158 Inspecting Pandits.

There is as yet no University in the Province but a Bill to establish one at Patna has recently been introduced into the Imperial Council. There are 7 Arts Colleges with 2,415 students and one Training College for 32 students, which with the Patna College, the Ravenshaw College at Cuttack and the Greer Bhumihar Brahman College at Muzaffarpur is maintained by Government. The College at Bhagalpur, the Bihar National College at Bankipore and the Dublin University Mission College at Hazaribagh are aided by Government. There are 97 High Schools, 94 for boys and 3 for girls with 32,392 and 325 pupils, respectively. Of these the most important are the Zila Schools, maintained by Government at the headquarters of each district, and the Government Schools for girls at Cuttack and Bankipore, but 44 schools for boys and 1 for girls also receive aid from provincial revenues. Most of the schools of status lower than High Schools are managed by local bodies such as District Boards. Among these are 234 Middle English Schools with 23,625 pupils, 135 Middle Vernacular Schools with 11,936 pupils, and 23,402 Primary Schools with 6,43,117 pupils. Of the primary schools 17,876 are maintained or aided by public funds. For training vernacular teachers there are 5 first grade training schools, 107 smaller schools for training *gurus* or village school masters and 7 training schools for mistresses. Other special institutions include 36 technical and industrial schools, 4 commercial schools and 15 *Madrasas* where Persian and Arabic are the chief subjects of study. The expenditure on public instruction from provincial funds in 1915-16 was Rs. 84,55,722.

Contributed as follows:—

	Rs.
Provincial Revenue ..	30,22,874
District Funds	15,37,335
Municipal Funds	1,26,419
Fees	21,88,714
Other Services	13,02,132
Total ..	81,97,494

Spent on Indian education, to which may be added Rs. 2,58,228 spent on European Schools.

Medical.

The Medical Department is under the control of the Inspector-General of Civil Hospitals who is a Member of the Indian Medical Service Under him there are 20 Civil Surgeons who are responsible for the medical work of the districts at the head-quarters of which they are stationed. 57 Dispensaries are maintained by Government—

Public	19
Special Police	24
Canal	5
Others	9
Total ..	57

Besides these there are 309 Dispensaries maintained by Local bodies, Railways, private persons, etc. 3,182,293 patients including 41,959 in-patients in public dispensaries were treated in 1915. There is one Lunatic Asylum and 8 Institutions for the treatment of lepers.

The Sanitary Department is in charge of the Sanitary Commissioner who is directly subordinate to Government as its expert adviser in regard to sanitation. There are three Deputy Sanitary Commissioners who work under the control of the Sanitary Commissioner. Vaccination is carried out by a staff under the direction of the Sanitary Commissioner. There is also a Sanitary Engineer.

Administration.

Lieutenant-Governor, Sir Edward Gait, K.C.S.I., C.I.E. Assumed charge of office, 19th November 1915.

PERSONAL STAFF.

Private Secretary, J. C. B. Drake, I.C.S.

Aide-de-Camp, Second Lieutenant Thoma White Lovelace.

Honorary Aides-de-Camp, Hon. Capt. Sardar Bahadur Hira Singh, Subadar Major Sita Ram Singh, Major A. T. Peppe.

EXECUTIVE COUNCIL.

E. V. Levinge, C.S.I. Took his seat, 1st August 1912.

Maharaja Bahadur Sir Rameswar Singh, K.C.I.E., of Darbhanga. Took his seat, 1st August 1912.

Walter Maude, C.S.I.

LEGISLATIVE COUNCIL.

President, The Lieutenant-Governor.

Vice-President, E. V. Levinge, C.S.I.

Ex-Officio.

The Members of the Executive Council.

NOMINATED.

Officials.

Ashan-ud-din Ahmad.
C. E. A. William Oldham.
L. C. Adami.
H. J. McIntosh, I.C.S.
Hugh McPherson.
Blanchard Foley.
H. Coupland.
F. Clayton.
E. G. Stanley.
Havilland Le Mesurier.
James David Sifton, I.C.S.
Lt.-Col. Bawa Jiwan Singh, I.M.S.
Edward Charles Ryland.
L. F. Morshead.
Col. G. J. Hamilton Bell.

Non-Officials.

Maharaja Bahadur Sir Ravaneswar Prasad Singh, K.C.I.E.
Rai Bahadur Nishi Kanta Sen.
Madhu Sudan Das, C.I.E.
Rev. A. Campbell, D.D.

ELECTED.

Raja Harihar Parshad Narayan Singh.
Babu Maheshwar Prashad.
Kirtyanand Singh.
Babu Ganesh Lal Pandit.
Kumar Thakurai G. Prasad Singh.
W. A. Ironside.
D. J. Reed.
Moulvi Saiyid Nurul Hasan.
Saiyid Ahmad Husain.
Saiyid Muhammad Naim.
Khwaja Muhammad Nur.
Bishun Prasad.
Dwarka Nath Rai Bahadur.
Lachmi Prasad Sinha.
Braja Sundar Das.
Sharat Chandra Sen.
Purnendu Narayan Singh.
Adit Prashad Singh.
Kumar Sheonandan Prasad Singh.
Babu Gopabandhu Das.
Shyam Krishna Sahay.

SECRETARIAT.

Chief Secretary to Government, Political, Appointment, and Educational Department, H. McPherson.

Secretary to Government, Financial and Municipal Departments, J. D. Sifton.

Secretary to Government, Revenue Department, H. Coupland.

Secretaries to Government (P. W. D.), Irrigation Branch, F. Clayton.

Buildings and Roads Branch, E. G. Stanley.

BOARD OF REVENUE.

Member, E. H. C. Walsh.

MISCELLANEOUS APPOINTMENTS.

Director of Public Instruction, J. G. Jennings, M.A.

Inspector-General of Police, R. T. Dundas.

Conservator of Forests, H. H. Haines.

Inspector-General of Civil Hospitals, Col. G. J. H. Bell.

Sanitary Commissioner, Lt.-Col. E. C. Hare, I.M.S.

Inspector-General of Prisons, Lt.-Col. Bawa Jiwan Singh.

Accountant-General, V. C. Scott.-O'Connor.

Director of Agriculture, G. Milne.

The Central Provinces and Berar.

The Central Provinces and Berar compose a great triangle of country midway between Bombay and Bengal. Their area is 130,991 miles, of which 82,000 are British territory proper and the remainder held by Feudatory Chiefs. The population (1911) is 13,916,308 under British administration and 2,117,002 in the Feudatory States. Various parts of the Central Provinces passed under British control at different times in the wars and tumult in the first half of the 19th century and the several parts were amalgamated after the Mutiny, in 1861, into the Chief Commissionership of the Central Provinces. Berar was, in 1853, assigned to the East India Company as part of a financial arrangement with the Nizam and was transferred to the Central Provinces in 1903, as the result of a fresh agreement with the Nizam.

The Country.

The Central Provinces may roughly be divided into three tracts of upland, with two intervening ones of plain country. In the north-west, the Vindhyan plateau is broken country, covered with poor and stunted forest. Below its precipitous southern slopes stretches the rich wheat growing country of the Nerbudda valley. Then comes the high Satpura plateau, characterised by forest-covered hills and deep water-cut ravines. Its hills decline into the Nagpur plain, whose broad stretches of shallow black cotton soil make it one of the more important cotton tracts of India and the wealthiest part of the C. P. The Eastern half of the plain lies in the valley of the Wainganga and is mainly a rice growing country. Its numerous irrigation tanks have given it the name of the "lake country" of Nagpur. Further east is the far-reaching rice country of Chattisgarh, in the Mahanadi basin. The south-east of the C. P. is again mountainous, containing 24,000 square miles of forest and precipitous ravines, and mostly inhabited by jungle tribes. The Feudatory States of Bastar and Kankar lie in this region. Berar lies to the south-west of the C. P. and its chief characteristic is its rich black cotton-soil plains.

The People.

The population of the province is a comparatively new community. Before the advent of the Aryans, the whole of it was peopled by the Gonds and these aboriginal inhabitants fared better from the Aryans than their like in most parts of India because of the rugged nature of their home. But successive waves of immigration flowed into the province from all sides. The early inhabitants were driven into the inaccessible forests and hills, where they now instituted a large portion of the tribes in those parts, who form a quarter of the whole population of the C. P. The Gonds are still found in large numbers in all parts of the province, but they are partially concentrated in the south-east. The main divisions of the new comers are indicated by the language divisions of the province. Hindi, brought in by the Hindustani-speaking peoples of the North, prevails in the North and East; Marathi in Berar and the west and centre of the C. P. Hindi is spoken by 56 per cent. of the population and is the *lingua franca*. Marathi by 31 per cent. and in Berar, and Gondi by 7 per cent. The effects of invasion are curiously illustrated in Berar, where numbers of Mosiems have Hindu names, being descendants of former Hindu officials who on the Mahomedan invasion adopted Islam rather than lose their positions. The recent census shows that a gradual Brahmanising of the aboriginal tribes is going on. The tribes are not regarded as impure by the Hindus and the process of absorption is more or less civilising.

Industries.

When Sir Richard Temple became first Chief Commissioner of the C. P. the province was land-locked. The only road was that leading in from Jubbulpore to Nagpur. The British administration has made roads in all directions, the two trunk railways between Bombay and Calcutta run across the province and in the last few years a great impetus has been given to the construction of subsidiary lines. These developments have caused a steady growth of trade and have aroused vigorous progress in every department of life. The prime industry is, of course, agriculture, which is assisted by one of the most admirable agricultural departments in India and is now receiving additional strength by a phenomenal growth of the co-operative credit movement. The land tenure is chiefly on the zemindari; or great land-lord, system, ranging, with numerous variations, from the great Feudatory chiefships, which are on this basis, to holdings of small dimensions. A system of land legislation has gradually been built up to protect the individual cultivator. Berar is settled on the Bombay ryotwari system. Thirty-eight per cent. or about 44,000 square miles of the C. P. is forest: in Berar the forest area is 3,941 square miles. The rugged nature of the greater part of the country makes forest conservation difficult and costly. Excluding forest and wastes, 57 per cent. of the total land is occupied for cultivation; in the most advanced districts the proportion is 80 per cent.; and in Berar the figure is also high. The cultivated area is extending continuously except for the temporary checks caused by bad seasons. Rice is the most important crop of the C. P., covering a quarter of the cropped area. Wheat comes next, with 15¼ per cent., then pulses and cereals used for food and oil seeds, with 11 per cent and cotton with 7 per cent. In Berar cotton occupies nearly 40 per cent. of the cropped area, jowar covers an equal extent, then wheat and oil seeds. In agriculture more than half the working population is female.

Commerce and Manufactures.

Industrial life is only in its earliest development except in one or two centres, where the introduction of modern enterprise along the railway routes has laid the foundations for great future developments of the natural wealth of the province. Nagpur is the chief centre of

a busy cotton spinning industry. The Empress Mills, owned by Parsi manufacturers, were opened there in 1877 and the general prosperity of the cotton trade has led to the addition of many mills here and in other parts of the province. The total output of spun yarn now amounts to approximately 50 million yards a year.

The largest numbers engaged in any of the modern industrial concerns are employed in manganese mining. Then follow coal mining, the Jubbulpore marble quarries and allied works the limestone quarries, and the mines for pottery clay, soapstone, &c.

The total number of factories of all kinds legally so described was 447 in 1916, the latest period for which returns are available and the number of people employed in them 49,459. The same economic influences which are operative in every progressive country during its transition stage are at work in the C. P. and Berar, gradually sapping the strength of the old village industries, as communications improve, and concentrating industries in the towns. While the village industries are fading away, a large development of trade has taken place. The last pre-war reports showed an increase in volume by one-third in eight years. In 1914 for the first time, statistics for the Berar factories were incorporated with those of the C. P.

Administration.

The administration of the Central Provinces and Berar is conducted by a Chief Commissioner, who is the controlling revenue and executive authority and is appointed by the Governor-General-in-Council. He is assisted by three secretaries, two under-secretaries and an assistant secretary. Simultaneously with the jubilee of the foundation of the Province in 1913 a Legislative Council was constituted. It consists of 24 members, excluding the Chief Commissioner, 7 being elected by municipalities, District Councils and Landholders in the C. P. and 17 nominated by the Chief Commissioner, of whom not more than 10 may be officials and 3 shall be non-officials chosen respectively by the municipalities, District Boards and Landholders of Berar. The Chief Commissioner may nominate an additional member, official or non-official, who has special knowledge of a subject on which legislation is pending. The C. P. are divided for administrative purposes into four divisions, and Berar constitutes another division. Each of these is controlled by a Commissioner. Berar is divided into four districts, three other divisions into five districts each and one into three, and these are controlled by Deputy-Commissioners, immediately subordinate to the Commissioners. The principal heads of Provincial departments are the Commissioner of Settlements and Director of Land Records, the Inspector-General of Civil Hospitals and Sanitary Commissioner, the Inspector-General of Police, the Inspector-General of Prisons, the Director of Public Instruction, the Commissioner of Excise, the Inspector-General of Registration, Assessed taxes, &c., and the Director of Agriculture and Industries. The Deputy-Commissioners of districts are the chief revenue authorities and District Magistrates, and they exercise the usual powers and functions of a district officer. The district forests are managed by a forest officer, usually a member of the Imperial Forest Service, over whom the Deputy-Commissioner has certain powers of supervision, particularly in matters affecting the welfare of the people. Each district has a Civil Surgeon, who is generally also Superintendent of the District Jail and whose work is also in various respects supervised by the Deputy-Commissioner. The Deputy-Commissioner is also marriage registrar and manages the estates of his district which are under the Court of Wards. In his revenue and criminal work the Deputy-Commissioner is assisted by (a) one or more Assistant Commissioners, or members of the Indian Civil Service; (b) one or more Extra-Assistant Commissioners, or members of the Provincial Civil Service, usually natives of India, but including a few Europeans and Eurasians; and (c) by tahsildars and naibtahsildars, or members of the Subordinate service, who are nearly always natives of India. The district is divided for administrative purposes into tahsils, the average area of which is 1,500 square miles. In each village a lambardar, or representative of the proprietary body, is executive headman.

Justice.

The Court of the Judicial Commissioner is the highest court of appeal in Civil cases, and also the highest Court of criminal appeal and revision for the Central Provinces and Berar except in reference to proceedings against European British subjects and persons jointly charged with European British subjects: in such cases the High Court of the N. W. P. and the High Court of the Bombay have jurisdiction over different parts of the Provinces.

The Court sits at Nagpur and consists of a Judicial Commissioner (who is appointed by the Governor-General in Council) and 3 Additional Judicial Commissioners of whom one at least must be an advocate of the Court or a Barrister or pleader of not less than 10 years' standing.

Subordinate to the Judicial Commissioner's Court are the District and Sessions Judges (9 in number) each of whom exercises civil and criminal jurisdiction in a Civil and Sessions district comprising one or more Revenue districts. The civil staff below to the District and Sessions Judge consists of Sub-Judges and Munsiffs.

Local Government.

Municipal administration was first introduced under the Punjab Municipal Acts and the Municipality of Nagpur dates from 1864. Several revising Acts extend its scope. Viewed generally, municipal self-government is considered to have taken root successfully. The general basis of the scheme is the Local Board for each tahsil and the District Council for each district. In Berar these bodies are called Taluk Boards and District Boards. The larger towns have municipalities. A certain proportion of the Local Board members are village headmen, elected by their own class; others are elected representatives of the mercantile and trading classes and a third proportion, not exceeding ⅓ of the whole, are nominated by Government. The constitution of the District Councils is similar. The officers

of the District Councils are frequently non-officials, but it is generally found convenient that the Tahsildar and Naib Tahsildar should be Chairman and Secretary of the Local Boards. The District Councils have no power of taxation and Local Boards derive their funds in allotments from the District Councils. Rural education and sanitation are among the primary objects to which these bodies direct their attention and expenditure on famine relief is in the first instance a charge upon the District Council funds.

Finance.

The main sources of Government income in the province has always been the land revenue, but under Mahratta rule many petty imposts were added in all branches of trade and industry and life in general. Thus there was a special tax on the marriage of Banias and a tax of a fourth of the proceeds of the sale of houses. The scheme of Provincial finance was introduced in 1871-72. Special settlements under this system have been necessitated in view of the special circumstances of the province and the recurrence of famine, which a few years ago caused a severe economic strain upon the province. The wave of prosperity which has spread over the country in the past 14 years, since the end of the previous period, has more than trebled the funds available for the administration, compared with what they were before the several years of scarcity, and the progress of the administration and of expenditure has increased correspondingly, without any increase of taxation under provincial heads.

Public Works.

The Public Works Department is controlled by a Chief Engineer, who is also Secretary to the Chief Commissioner. There are two Superintending Engineers for roads and buildings and a third in charge of irrigation. In 1892 a separate division of the Public Works Department was formed for the construction of roads and buildings in the Feudatory States. The expansion of the department and its work has been one of the most remarkable features of the administration in the past decade and a half, largely owing to the demands of a progressive age in regard to communications and new buildings. The Irrigation Branch of the P. W. D. represents a completely new departure. It was formerly the accepted view that the irregular surface of the country would make irrigation canals impossible and that the S. W. monsoon was so regular that it would pay better to relieve famine than to prevent it. Both conclusions have been reversed. Picked officers investigated projects for irrigation when the Irrigation Commission was appointed (1901) and canal and storage works have since been advanced with vigour. The Tandula, Wainganga and Mahanadi canal projects are amongst the more important schemes.

Police.

The police force was constituted in its present basis on the formation of the Provinces, the whole of which, including the Cantonments and the Municipalities, is under one force. The strength is equal to one man per 8 square miles of area. The superior officers comprise an Inspector-General, whose jurisdiction extends over Berar, two Deputy Inspectors-General, for assistance in the administrative control and supervision of the Police force, including the Criminal Investigation Department, and the usual cadre of District Superintendents of Police, Assistant and Deputy Superintndents and subordinate officers. On three railways special Railway Police are employed. A Special Reserve of 486 men is distributed over the head-quarters of seven districts, for use in dealing with armed disturbers of the peace in whatever quarter they may appear. The men in this reserve are regularly drilled and are armed with rifles. There is a small force of Mounted Police. The Central Provinces has no rural police as the term is understood in other parts of India. The village watchman is the subordinate of the village headman and not a police official and it is considered very desirable to maintain his position in this respect.

Education.

The educational department was constituted in 1862 and the scheme then drawn up has remained the basis of the system of public education to the present day. The leading principles are that the department should content itself with the direct management of colleges and higher secondary schools, the training of teachers and inspection in work in rural areas. The maintenance of rural schools should as far as possible be left to the local authorities, every encouragement should be given to private philanthropy and no Government schools should be founded where there existed a sufficient number of institutions capable, with the assistance of the State, of supplying the local demand for instruction. At the head of the Department is the Director of Public Instruction, who has a staff of Inspectors and Inspectresses for girls schools. All these appointments are included in the Indian Educational Service. An Agency Inspector supervises the schools of the Feudatory States. The province has five colleges: the Robertson and Training Colleges at Jubbulpore, and the Morris and Hislop Colleges and the Victoria College of Science at Nagpur. The Agricultural Department maintains an Agricultural College at Nagpur. The Colleges are affiliated to Allahabad University, but a demand has arisen for a local University.

After much preliminary discussion, a committee was appointed in July, 1914, to frame a scheme "which shall provide for a University of the teaching type at Nagpur, or in its immediate neighbourhood, and for the affiliation to this central institution of colleges situated in other places in the C. P. and Berar." The committee in their report, issued in 1915, proposed a University presenting some of the features of an affiliating University but possessed of functions and endowed with responsibilities which transcend the scope of those universities in India which conform to that type. "For (says the report) it will not only be an examining but a teaching university, and its teaching activities will not be limited to the provision of courses of instruction for postgraduate degrees, but will embrace several departments of study in the lower courses. The main difference, however, between the university which we propose and existing universities will lie in the closer relations of the former with its constituent colleges. According to our scheme, the

University will exercise an effective control over the teaching and discipline of all the institutions which come within its jurisdiction. For it is only by exercising control over its component parts that the Universities can maintain a high standard of moral and intellectual endeavour, and create traditions which will make themselves felt in the development of the Provinces as a whole."

The committee said: "The University which we propose will possess powers which will entitle it to a high place in the administrative machinery of the Provinces. But administrative autonomy involves a certain measure of financial independence, and we have made proposals accordingly. It is true that the University will be mainly dependent on the Government for financial support. Apart from fees, the University at first at any rate will have no resources of its own. But we confess to a desire to see it vested with financial control over the grant which it receives from Government as well as over its other receipts. If we may be permitted to employ a simile, the Government should regard the University as a business concern, of which it is a shareholder with a seat on the Board of Directors rather than as a servant to whom it makes certain payments, the disposal of which must be checked frequently and in detail.

"We recommend that the administration of the University be vested in a Chancellor, Vice-Chancellor, Senate and Syndicate. The Chief Commissioner of the Province will be the Chancellor. The Vice-Chancellor will be an honorary officer nominated by the Chancellor. The Senate will be the supreme authority, subject to the general control of the Government. It will be a body of 75 members, consisting partly of representatives of Government and of the general public, partly of elected representatives of the graduates and partly of teachers of the University and the constituent colleges, the latter being nominated by the Chancellor. The Syndicate will be the executive of the University, and will consist of the Vice-Chancellor, the Director of Public Instruction, a member of the Senate nominated by the Chancellor, four Principals of colleges, the Deans of the Faculties, and three members elected by the Senate from among their own number, of whom not more than one shall be a member of the teaching staff. The Chancellor's nominee on the Syndicate should be a person possessed of general administrative experience. In both these bodies the members of the teaching staff will predominate.

"After careful consideration, we have arrived at the conclusion that a university possessing the wide administrative and educational powers which we propose must be governed by a body in which professional and expert opinion will predominate. This we think we have secured by giving the members of the teaching staff a predominant voice in the counsels of the University.

"We recommend that the University shall contain, at its inception, Faculties of Arts, Law and Science, and a department for the training of teachers subordinate to the Faculty of Arts. We have considered the question of establishing a Faculty of Agriculture. But in view of the necessity which the Government Department of Agriculture feels of pursuing a tentative policy for some years to come with regard to agricultural education, we feel that it would be inadvisable at the present juncture to suggest that the University should make provision for instruction in this branch knowledge. As to the Medical and Engineering Schools, they are designed to meet certain special needs, and do not aim at providing courses of a university standard. It will be many years before the demand for higher courses will justify the establishment of Faculties in Medicine and Engineering."

Until recent years, the demand for education, primary or secondary, was satisfied by a few institutions in the larger towns, while in the whole of the rural districts primary education had to be pressed on an apathetic and even obstructive agricultural population. The new spirit of progress in recent years has quickened the public pulse and the efforts of Government to effect improved facilities have responded accordingly. Special grants from the Government of India budget surpluses in recent years have largely been devoted to assisting the District Councils to overtake their arrears of primary school building. District Councils in general have allowed their zeal for education to carry them into programmes of development beyond their means.

Medical.

The medical and sanitary services of the province are respectively controlled by an Inspector-General of Civil Hospitals and a Sanitary Commissioner. The medical department has progressed along comparatively stereotyped lines. A striking advance has been made in recent years with urban sanitation. The principal medical institutions are the Mayo Memorial Hospital at Nagpur, opened in 1874, with accommodation for 84 in-patients; the Victoria Hospital at Jubbulpore, opened in 1886 and accommodating 95 in-patients; the Lady Dufferin Hospital at Nagpur and the Lady Elgin Hospital at Jubbulpore, these last two being for women and containing together accommodation for 68 in-patients. The province has one lunatic asylum at Nagpur Vaccination is compulsory in some Municipal towns to which the Vaccination Act has been extended. The administration in 1913 sanctioned the opening of peripatetic dispensaries in unhealthy areas.

Administration.

Chief Commissioner, Sir B. Robertson, K.C.S.I., K.C.M.G., C.I.E., I.C.S., LL.D., apptd. 3rd Aug. 1912.

Personal Assistant, J. Collaco (on special duty.)

Chief Secretary, The Hon'ble Mr. F. S. A. Slocock, C.I.E., I.C.S.

Second Secretary, The Hon'ble Mr. J. Hullah, I.C.S.

Third Secretary, The Hon'ble Mr. J. F. Dyer, I.C.S.

Legal Secretary, The Hon'ble Mr. C. S. Findlay, I.C.S.

Under Secretaries, Mr. A. McDonald, I.C.S. and Mr. A. Macleod, I.C.S.

Registrar, C. E. Higher.

Secretary, Public Works Department (Irrigation Branch), The Hon'ble Mr. A. J. Wadley; (Roads and Buildings), Lt.-Col. S. G. Rivett-Carnac, R.E.

Financial Commissioner, The Hon'ble Mr. H. A. Crump., C.S.I., I.C.S.

BERAR.

Commissioner, The Hon'ble Mr. B. P. Standen, C. I. E., I. C. S.

Members of Council.

NOMINATED MEMBERS.

The Hon'ble Mr. Henry Ashbrooke Crump, C. S. I., I. C. S.
" " Bertram Prior Standen, C.I.E., I. C. S.
" " Francis Samuel Alfred Slocock, C. I. E., I. C. S.
" " Alfred John Wadley.
" " John Hullah, I. C. S.
" " Charles Stewart Findlay, I.C.S.
" " James Ferguson Dyer, I.C.S.
Col. William Henry Bamner Robinson, C. B., I.M.S.
Mr. Robert Curzon Henry Moss King, I.C.S.
" Arthur Innes Mayhew.
" George Paris Dick, Bar.-at-Law.

NON-OFFICIALS.

The Hon'ble Khan Bahadur Nawab Muhammad Salamullah Khan, C.I.E.
" Mr. Sorabji Bezonji Mehta.
" Rai Bahadur Sir Bipin Krishna Bose, Kt., C.I.E.
" Rao Bahadur Madho Rao Ganesh Despande.

ELECTED MEMBERS.

The Hon'ble Mr. Moreshwar Rao Dixit, B.A., Bar.-at-Law.
" Rao Bahadur Narayan Rao Kelkar.
" Mr. Pyare Lal Misra.
" " Manoharpant Krishnarao Golwalkar.
" Rai Sahib Govind Lal Purohit.
" Rai Sahib Cullianji Murarji Thackar, Bar.-at-Law.
" Mr. Seohar Raghubir Singh.
" " Shripad Balvant Tambe.
" Rao Sahib Ramchandra Vishnu Mahajani.
" Mr. Yeshwant Govind Deshpande.

MISCELLANEOUS APPOINTMENTS.

Director of Public Instruction, Mr. A. I. Mayhew.
Inspector-General of Police, The Hon'ble Mr. R. C. H. M. King, I.C.S.
Chief Conservator of Forests, Mr. Montague Hill, C.I.E., F.L.S.
Inspector-General of Civil Hospitals, and Sanitary Commissioner, The Hon'ble Col. W. H. B. Robinson, C. B., I. M. S.
Commissioner of Excise, Mr. A. E. Nelson, I.C.S.
Comptroller (Financial Dept.), Mr. J. S. Milne.
Postmaster-General, Mr. W. A. Roussac.
Director of Agriculture and Industries, Mr. C. G. Leftwich, I.C.S.
Registrar of Co-operative Credit Societies, Mr. H. R. Crosthwaite, C.I.E.

CHIEF COMMISSIONERS.

Colonel E. K. Elliot	1861
Lieut.-Colonel J. K. Spence (*Officiating*) .	1862
R. Temple (*Officiating*)	1862
Colonel E. K. Elliot	1863
J. S. Campbell (*Officiating*)	1864
R. Temple	1864
J. S. Campbell (*Officiating*)	1865
R. Temple	1865
J. H. Morris (*Officiating*)	1867
G. Campbell	1867
J. H. Morris (*Officiating*) .. .. .. Confirmed 27th May 1870.	1868
Colonel R. H. Keatinge, V.C. C.S.I. (*Offg.*)	1870
J. H. Morris, C.S.I.	1872
C. Grant (*Officiating*)	1879
J. H. Morris, C.S.I.	1879
W. B. Jones, C.S.I.	1883
C. H. T. Crosthwaite (*Officiating*) .. Confirmed 27th January 1885.	1884
D. Fitzpatrick (*Officiating*)	1885
J. W. Neill (*Officiating*)	1887
A. Mackenzie, C.S.I.	1887
R. J. Crosthwaite (*Officiating*) .. .. Until 7th October 1889.	1889
J. W. Neill (*Officiating*)	1890
A. P. MacDonnell, C.S.I.	1891
J. Woodburn, C.S.I. (*Officiating*) .. .. Confirmed 30th November 1893.	1893
Sir C. J. Lyall, C.S.I., K.C.I.E.	1895
The Hon'ble Mr. D. C. J. Ibbetson, C.S.I.	1898
" Sir A. H. L. Fraser, K.C.S.I. (*Officiating*) Confirmed 5th March 1902.	1899
The Hon'ble Mr. J. P. Hewett, C.S.I., C.I.E. (*Officiating*) Confirmed 2nd November 1903.	1902
The Hon'ble Mr. F. S. P. Lely, C.S.I., K.C.I.E., (*Officiating*) Confirmed 23rd Dec. 1904.	1904
The Hon'ble Mr. J. O. Miller, C.S.I. ..	1905
S. Ismay, C.S.I. (*Officiating*) .. .. Until 22nd October 1906.	1906
F. A. T. Phillips (*Officiating*) .. .. Until 25th March 1907. Also from 20th May to 22nd November	1907 1909
The Hon'ble Sir R. H. Craddock, K.C.S.I.	1907
The Hon'ble Mr. H. A. Crump, C.S.I. (*Officiating*).	1912
" M. W. Fox-Strangways, C.S.I. (Sub. *pro tem.*)	1912
The Hon'ble Sir B. Robertson, K.C.S.I., C.I.E.	1912
" Mr. Crump, C. S. I. ..	1914
" Sir B. Roberton, K.C.S.I. ..	1914

North-West Frontier Province.

The North-West Frontier Province, as its name denotes, is situated on the north-west frontier of the Indian Empire. It is in form an irregular strip of country lying north by east and south by west and may generally be described as the tract of country, north of Baluchistan, lying between the Indus and the Durand boundary line with Afghanistan. To the north it extends to the mountains of the Hindu Kush. From this range a long broken line of mountains runs almost due south, dividing the province from Afghanistan, until the Sulaiman Range eventually closes the south of the Province from Baluchistan. The greatest length of the province is 408 miles, its greatest breadth 279 miles and its total area about 39,000 square miles. The territory falls into three main geographical divisions: the Cis-Indus district of Hazara; the narrow strip between the Indus and the Hills, containing the Districts of Peshawar, Kohat, Banu and Dera Ismail Khan, and the rugged mountainous regions on the north and west between those districts and the border line of Afghanistan. Hazara and the four districts in the second division contain 13,418 square miles. The mountain regions, north and west, are occupied by tribes subject only to the political control of the Chief Commissioner in his capacity as Agent to the Governor-General. The area of this tract is roughly 25,500 square miles and in it are situated, from north to south, the political agencies severally known as the Malakand, Khyber, Kurram, Tochi and Wana Agencies. Each of the Deputy Commissioners of the five administered districts is responsible for the management of political relations with certain tribes or sections of the tribes across the frontier. A few hundred miles of the trans-border Territory are internally administered by the Political Agents, but the bulk of the trans-border population is free from any internal interference, so long as offences are not committed and so long as the tribes observe the conditions on which allowances are paid to many of them.

The area of the Province is a little more than half that of Bombay (excluding Sind and Aden) and amounts to more than three-fifths of the size of England without Wales. The density of population throughout the Province equals 98 persons to a square mile, but in the more favoured portions the pressure of population is much greater. In the Hazara District there are 207 persons to a square mile and in the trans-Indus plains tract the number is 152. The key to the history of the people of the N.-W. F. P. lies in the recognition of the fact that the valley of Peshawar was always more closely connected politically with Eastern Iran than with India, though in pre-Mahomedan times its population was mainly Indian by race. Early history finds the Iranians dominating the whole Indus valley. Then came the Greek invasion under Alexander the Great, in B.C. 327, then the invasions of the Sakas, and of the White Huns, and later, the two great waves of Muhammadan invasion. Last came the Sikh invasion, beginning in 1818. The Frontier Territory was annexed by the British in 1849 and placed under the control of the Punjab Government. Frequent warfare occurred with the border tribes; but since the conclusion of peace with the Afridis in 1898, the whole border has been undisturbed except for the expedition against the Zakka Khel Afridis in 1908 and the recent blockade Mohmand of 1916-17 and Waziristan Expedition of 1917.

The division of the Frontier Province from the Punjab was frequently discussed, with the double object of securing closer and more immediate control and supervision of the Frontier by the Supreme Government and of making such alterations in the personnel and duties of frontier officials as would tend to the establishment of improved relations between the local British representatives and the independent tribesmen. The province was eventually removed from the control of the Punjab administration in 1901. To it was added the political charge of Dir, Swat and Chitral, the Political Agent of which had never been subordinate to the Punjab. The new Province was constituted under a Chief Commissioner and Agent to the Governor-General, with headquarters at Peshawar, in direct communication with the Government of India in the Foreign Department. In political questions there is no intermediary between the Chief Commissioner and the local officer; an arrangement designed to secure both prompt disposal of references and the utilisation of the expert knowledge of frontier conditions for which the head of the administration is selected.

The People.

The total population of the N.-W.F.P. (1911) is 3,819,027, made up as follows:—

Hazara	603,028
Trans-Indus Districts	1,593,905
Trans-Border Area	1,622,094

This last figure is estimated. There are only 625·6 females per 1,000 males in the towns and 900 females per 1,000 males in rural areas. This disproportion of the sexes cannot at present be explained in the N.-W.F.P. any more than in other parts of Northern India, where it also appears. The discrepancy is greater here than in any other Province of India. There is no ground for believing that the neglect of girls in infancy has any effect in causing the phenomenon. On the other hand, the female population has to face many trials which are unknown to men. The evils of unskilled midwifery and early marriage are among them. Both the birth and death-rates of the Province are abnormally low. The birth rate in the administered districts, according to the last annual official reports, was 35·1 and the death-rate 33·3. There were 122·5 male births for every 100 females. It is recognised that in this matter, and in regard to population generally, the registration of females may be defective, inasmuch as the Pathan, for whatever reasons, regards the birth of a daughter as a misfortune, the less said about which the better. The population is naturally increasing, but emigration reduces the net result.

The dominant language of the Province is Pashtu and the population contains several lingual strata. The most important sections of the population, both numerically and by social position, are the Pathans. They own

a very large proportion of the land in the administered districts and are the ruling race, of the tribal area to the west. There is a long list of Pathan, Baluch, Rajput and other tribal divisions. Gurkhas have recently settled in the Province. The Mahomedan tribes constitute almost the whole population, Hindus amounting to only 5 per cent. of the total and Sikhs to a few thousands. The occupational cleavage of the population confuses ethnical divisions.

Under the North-West Frontier Province Law and Justice Regulation of 1901, custom governs all questions regarding successions, betrothal, marriage, divorce, the separate property of women, dower, wills, gifts, partitions, family relations such as adoption and guardianship, and religious usages and institutions, provided that the custom be not contrary to justice, equity or good conscience. In these matters the Mahomedan or Hindu law is applied only in the absence of special custom.

Climate, Flora and Fauna.

The climatic conditions of the N.-W.F.P., which is mainly the mountainous region, but includes the Peshawar Valley and the riveraine tracts of the Indus in Dera Ismail Khan District, are extremely diversified. The latter district is one of the hottest areas of the Indian continent, while on the mountain ranges the weather is temperate in summer and intensely cold in winter. The air is generally dry and hence the annual ranges of temperature are frequently very large. The Province has two wet seasons, one the S.-W. Monsoon season, when moisture is brought up from the Arabain Sea and the Bay of Bengal: the other in winter, when storms from Mesopotamia, Persia and the Caspian Districts bring widespread rain and snowfall. Both sources of supply are precarious and not infrequently either the winter or the summer rainfall fails almost entirely. The following description of the Daman, the high ground above the Indus, stretching across Dera Ismail Khan to the mountains on the west, occurs in a account written some years ago by Captain Crostwaite: "Men drink once a day and the cattle every second day. Washing is an impossible luxury. . . . It is possible in the hot weather to ride thirty miles and neither hear a dog bark nor see the smoke of a single fire." With the exception of the Kunhar River, in Hazara, which flows into the Jhelum, the whole territory drains into the Indus. The flora of the Province varies from the shrubby jungle of the south-eastern plains to barren hills, pine forests and fertile mountain valleys. Tigers used to abound in the forests but are now quite extinct; leopards, hyenas, wolves, jackals and foxes are the chief carnivora. Bear, deer and monkeys are found; a great variety of fish is caught in the Indus.

The mountain scenery is often magnificent. The frontier ranges contain many notable peaks of which the following are the principal:

Takht-i-Sulaiman, Sulaiman Range, in Dera Ismail Khan, 11,292 feet.

Pir Ghal, Sulaiman Range, in Mahsud Waziristan, 11,583 feet.

Sika Ram, in the Safed Koh, in the Kurram Agency, 15,621 feet.

Kagan Peaks of the Himalayas, in the Hazara District, 10,000 to 16,700 feet.

Istragh Peak (18,900 ft.), Kachin Peak 22,641 ft.), Tirich Mir (25,426 ft.), all in the Hindu Kush, on the northern border of Chitral Agency.

Trade and Occupations.

The population derives its subsistence almost wholly from agriculture. The Province is practically without manufactures. There is no considerable surplus of commercial products for export. Any commercial importance which the province possesses it owes to the fact that it lies across the great trade routes which connect the trans-border tribal territories and the marts of Afghanistan and Central Asia with India, but the influence of railways is diminishing the importance of these trading interests. The travelling traders (or Powindahs) from the trans-frontier area have always pursued their wanderings into India and now, instead of doing their trading in towns near the border, carry it by train to the large cities in India. Prices of agricultural produce have in recent years been high, but the agriculturists, owing to the poverty of the means of communication, have to some extent been deprived of access to Indian markets and have therefore been unable to profit by the rates prevailing. On the other hand, high prices are a hardship to the non-agricultural classes. The effects of recent extensions of irrigation have been important. Land tenures are generally the same in the British administered districts as in the Punjab. The cultivated area of the land amounts to 32 per cent. and uncultivated to 68 per cent.

The work of civilisation is now making steady progress. Relations with the tribes have improved, trade has advanced, free medical relief has been vastly extended, police administration has been reformed and the desire of people for education has been judiciously and sympathetically fostered. In the British administered districts 19 per cent. males and 7 per cent. females of the total population are returned as literates. The figures for males denote a very narrow diffusion of education even for India. Those for females are not notably low, but they are largely affected by the high literacy amongst Sikh women, of whom 13·3 per cent. are returned as literate. The inauguration of a system of light railways throughout the Province, apart from all considerations of strategy, must materially improve the condition of the people and also by that means strengthen the hold of the administration over them. The great engineering project of the Upper Swat River Canal, which was completed in 1914, and the lesser work of the Paharpur Canal, also completed a year or two ago, will bring ease and prosperity to a number of peasant homes. There has arisen in recent years the difficult question of the importation of thousands of rifles from the Persian Gulf. Elaborate measures were taken to stamp out the traffic, under the direction of the Naval Commander-in-Chief in the East Indies; and with the tardy consent of France an agreement was made with the Sultan of Muscat, to stop the trade in arms from that place, Muscat having been the entrepot for the traffic.

Administration.

The administration of the North-West Frontier Province is conducted by the Chief

Commissioner and Agent to the Governor-General in Council. His staff consists of—

(1) Officers of the Political Department of the Government of India.

(2) Members of the Provincial Civil Service.

(3) Members of the Subordinate Civil Service.

(4) Superintendents and Assistant Superintendents of Police.

(5) Officers recruited for the service of departments requiring special knowledge—Militia, Engineering, Education, Medicine and Forestry.

The cadre posts reserved for officers coming under the first head above are:—

Administration.	Chief Commissioner & Agent to the Governor-General		
	Secretary		
	Assistant Secretary		5
	Personal Assistant		
	Revenue Commissioner and Revenue Secretary		
	Resident in Waziristan...		1
	Deputy Commissioners	.. 5	
	Political Agents	.. 5	12
	District Judges	.. 2	
	Assistant Commissioners and Assistant Political Agents		13
High Court and Divisional Judges.	One Judicial Commissioner.		
	Two Divisional and Sessions Judges.		3

The districts under the Deputy Commissioners are divided into from two to five sub-collectorates, in charge of tahsildars, who are invested with criminal and civil and revenue powers, and are assisted by naib-tahsildars, who exercise only criminal and revenue powers. Some sub-divisions are in charge of Assistant or Extra Assistant Commissioners. The village community characteristic of some parts of India is not indigenous among the Pathans. Its place as a social unit is to some extent taken by the tribe, which is held together by the ties of kinship and ancient ancestry, real or imaginary. Modern municipal local government has been introduced in the towns. There are also district boards. The district is the unit for police, medical and educational administration and the ordinary staff includes a District Superintendent of Police, a Civil Surgeon, who is also the Superintendent of Jail and a District Inspector of Schools. The Province forms a single educational circle and only possesses one forest division, that of Hazara. There are four divisions of the Roads and Building Branch of the Public Works Department, each under an Executive Engineer. The Irrigation Department of the P. W. D. is in charge of a Chief Engineer, Irrigation, who is also *ex-officio* Secretary to the Chief Commissioner. The administration of the civil police force of the districts is vested in an Inspector-General. There is a special force of Frontier Constabulary. The revenue and expenditure of the Province are wholly Imperial. Of the Agencies only Kurram and Tochi Valley pay land revenue to the British Government. The revenue administration of all five administered districts is controlled by the Revenue Commissioner. For the administration of civil and criminal justice there are two Civil and Sessions divisions, each presided over by a Divisional and Sessions Judge. The Judicial Commissioner is the controlling authority in the Judicial branch of the administration, and his Court is the highest criminal and appellate tribunal in this Province. The principal officers in the present Administration are :—

Agent to the Governor General and Chief Commissioner, The Hon'ble Sir George Roos-Keppel, G.C.I.E., K.C.S.I., (assumed charge, 4th June 1908).

Resident Waziristan, The Hon'ble Sir John Donald, K.C.I.E., C.S.I.

Judicial Commissioner, W. P. Barton, C.I.E., I.C.S.

Revenue Secretary, Lieut.-Col. D. B. Blakeway, C.I.E., I.A.

Secretary to Chief Commissioner, E. H. Kealy, I.C.S.

Military Secretary to Chief Commissioner, Lieut. Col. G. J. Davis, D.S.O.

Assistant Secretary to Chief Commissioner, Major G. F. W. Anson.

Assistant Financial Secretary to Chief Commissioner, Bhai Sunder Singh.

Indian Personal Assistant to Chief Commissioner, Risaldar Moghal Baz Khan.

Inspecting Officer Frontier Corps, Lieut.-Col. J. S. Kemball, I.A.

Secretary, Public Works Department, Buildings and Roads Branch, Col. W. J. D. Dundee, C.I.E.

Secretary, Public Works Department, Irrigation Branch, F. W. Carne.

Chief Medical Officer, Lieut. Col. T. W. Irvine, I.M.S.

Inspector-General of Police, H. A. Close, C.I.E.

Commandant, Frontier Constabulary, R. C. Boyle.

Officiating Director of Public Instruction, L. Tipping, M. A.

Superintendent, Archæological Survey, Pandit V. Natesa Aiyar.

Divisional and Sessions Judges, Lieut.-Col. C. F. Minchin, D.S.O., I.A., (Derajat), F. P. Rennie, I.C.S. (Peshawar).

S. E. Pears, C.I.E., *Vice President, Provincial Recruiting Board and Special Recruiting Officer.*

Political Agents.

Major W. J. Keen, C.I.E., I.A., Dir, Swat and Chitral.

Nawab Sir Sahibzada Abdul Qaiyum, K.C.I.E., Khyber.

J. H. H. Bill, I.C.S., Tochi.

Major R. J. W. Heale, I.A., Kurram.

J. A. O. Fitzpatrick, C.I.E., Wana.

Deputy Commissioners.

H. N. Bolton, C.I.E., I.C.S., Peshawar.

Major R. Garratt, Kohat.

Major C. G. Crosthwaite, Bannu.

T. B. Copeland, I.C.S., Dera Ismail Khan.

H. H. R. Fraser, I. C S., Hazara.

Former Chief Commissioner.

Lieut.-Col. Sir Harold Deane, K.C.S.I., Died 7th July 1908.

The Province of Assam, 61,682 square miles in area, includes the Assam Valley Division, the Surma Valley and Hills Division and the State of Manipur. It owes its importance to its situation on the north-east frontier of India. It is surrounded by montainous ranges on three sides while on the fourth (the west) lies the Province of Bengal on to the plains of which debouch the two valleys of the Brahmaputra and the Surma which form the plains of Assam. These two valleys are separated from each other by the Assam Range, which projects westward from the hills on the eastern border.

Population.

The total population of the province in 1911 was 7,059,857, of whom 1½ millions were Mahomedans, 3⅓ millions Hindus and 1½ millions Animists. 46 per cent. of the population speak Bengali, 22 per cent. speak Assamese: other languages spoken in the province are Hindi, Uriya and a great variety of languages classified under the general heading of the Tibeto-Chinese languages. Owing to the great areas of waste and rivers the density of the province is only 115, which, compared with that of most other parts of India, is low, but is more than double that of Burma.

Agricultural Products.

It has agricultural advantages for which it would be difficult to find a parallel in any part of India, climate, soil, rainfall and river systems all being alike favourable to cultivation. Rice is the staple food crop, about 4 million acres being devoted to this crop. In 1915-16 the outturn of rice was 1,319,625 tons. Except in the Himalayan Terai irrigation is unnecessary. Jute and tea are the most important crops grown for export; the area under jute being generally about 40,000 acres, that under tea about 376,000 acres. In 1916 the total number of tea gardens was 779, the production being estimated at 245,385,920 lbs. Wheat and tobacco are also grown and about 30 square miles are devoted to sugarcane. The total area of 'reserved' forest is about 4,907 square miles and the unclassified state forests cover about 18,509 square miles.

Meteorological Conditions.

Rainfall is everywhere abundant, and ranges from 93 to 124 inches. The maximum is reached at Cherrapunji in the Khasi Hills, which is one of the wettest places in the world, having a rainfall of 458 inches. The temperature ranges from 59° at Sibsagar in January to 84° in July. Earthquakes of considerable severity have taken place, by far the worst being that which occurred in 1897.

Land Tenures.

Most of the actual cultivators of the soil usually hold direct from the State, and the area of land on which rent is paid is inconsiderable. A large part of Goalpara and of the more densely populated portions of Sylhet was however included in the permanent settlement of Bengal; and the system of land tenure in Cachar, and the existence of large estates on privileged rates of revenue in Kamrup have tended to produce a tenant class which at the 1901 census amounted to more than one-third of the total number of persons supported by agriculture. In the 1911 census a very marked increase in tenancy throughout the Province is shown.

The Assam Labour and Emigration (Amendment) Bill was passed on the 24th March 1915. The Act carries with it the abolition of the recruiting contractor and the creation of Labour Bureau to supervise recruiting.

Mines and Minerals.

The only minerals in Assam worked on a commercial scale are coal, limestone and petroleum oil. The most extensive coal measures are in the Naga Hills district, where about 300,000 tons are raised annually and used mainly by the river steamers. Limestone is quarried in the Khasi and Jaintia Hills, in Sylhet, and in the Gare hills. Petroleum is worked only in Lakimpur.

An account of the petroleum occurrences in Assam was recently published in the memoirs of the Geological Survey of India. It states that the petroleum localities in this province are confined to a curved belt of country along the basins of the Brahmaputra and Surma. This belt is traceable over a distance of some 800 miles from N.E. Assam through Kachar and Chitagong to the Arakan coast, where it has a S.S.E. trend. It is roughly concentric with the trend of the Burmese oil belt, the distance between the two varying from 70 to 150 miles.

Manufactures and Trade.

Silk is manufactured in the Assam Valley; the weaving being done by the women. Cotton weaving is also largely practised by the women, and almost every house contains a loom; the cloth is being gradually displaced by imported goods of finer texture and colour. Boat building, brass and metal and earthenwares, tea manufacture and limestone burning are the other industries apart from agriculture, which itself employs about 84 per cent. of the population. Assam carries on a considerable **trade** with the adjoining foreign tribes and countries. In 1915-16 the value of frontier trade registered was about Rs. 23 lakhs. The decrease in both imports and exports is attributable mainly to the contraction of trade with Bhutan, the proportion of the trade carried on with this country being about 96 per cent. of the total in recent years. The value of the total trade with Bhutan was about Rs. 21¼ lakhs in the year under review as compared with approximately Rs. 34⅜ lakhs in the previous year. The decrease is ascribed largely to the occurrence of a few cases of cholera in a Bhutia encampment above Subankhata, in consequence of which the Bhutan authorities ordered the return of the Bhutias to the country earlier than usual. The export trade with Abor, Mishmi and other tribes declined from Rs. 34,272 to Rs. 26,611 owing to chiefly to a lesser demand for opium.

Communications.

The trade of Assam is chiefly carried by river, but increasing use is being made of the Assam Bengal Railway which runs from the port of Chittagong to Silchar at the eastern end of the Surma Valley. A branch of that line runs along the south of the Assam Valley from Gauhati to Tinsukia, a station on the Dibru-Sadiya Railway; and is connected with the

Surma Valley branch by a line that pierces the North Cachar Hills, the points of junction being Lumding in the northern and Badarpur in the southern valley. The Eastern Bengal State Railway connects Assam with the Bengal system *via* the valley of the Brahmaputra. The excellence of its water communication makes Assam less dependent upon roads than other parts of India; but in recent years the road system has been developed and there is a trunk road through the whole length of the Brahmaputra Valley and an excellent road from Gauhati to Shillong. A large fleet of steamers maintained by the India General Steam Navigation Company and the Rivers Steam Navigation Company plies on the rivers of both valleys. A daily service of passenger boats runs from Goalundo to Dibrugarh.

Finance.

Gross receipts rose in 1915-16 from Rs. 1,72,44,772, in the previous year to Rs. 1,78,63,331, while the gross expenditure fell from Rs. 1,71,53,295 to Rs. 1,56,66,381. The provincial account opened with a balance of Rs. 29, 48, 878 which included Imperial assignments for various purposes aggregating Rs. 20,28,000. Receipts to Rs. 1,42,88,971 and expenditure to Rs. 1,52,40,071. Further Imperial assignments of Rs. 4,48,000 were received during the year and the provincial account closed with a balance of Rs. 19,97,778.

Education.

There are in the Province at present 4,822 educational institutions including two Arts Colleges with 233,883. Of the total population 333,672 are returned as literate. The distribution of literacy naturally varies considerably throughout the Province. The large number of immigrant coolies and of aboriginal tribes tends to lower the proportion of literates in the Brahmaputra Valley, and a comparatively high standard of literacy in the Hills is due mainly to the progress of education amongst the Khasis of whom a large proportion have been converted to Christianity. Amongst the Animists in the Hills the Lushais seem to have an extraordinary keenness for learning, which is the more remarkable, because the administration of their district dates from quite recent times.

Administration.

The province of Assam was originally formed in 1874 in order to relieve the Lieutenant-Governor of Bengal of part of the administration of the huge territory then under him. In 1903, as the result of further deliberations, it was decided to add to the small Province of Assam the eastern portion of its unwieldy neighbour and to consolidate those territories under a Lieutenant-Governor. The Province of Eastern Bengal and Assam as then constituted was again broken up on the 1st of April, 1912: the Eastern Bengal Districts were united with the Bengal Commissionerships of Burdwan and the Presidency to form the Presidency of Bengal under a Governor-in-Council, Bihar, Chota Nagpur and Orissa were formed into a separate province, while the old Province of Assam was re-constituted under a Chief Commissioner.

The capital is Shillong, a town laid out with great taste and judgment among the pine woods on the slopes of the Shillong Range which rises to a height of 6,450 feet above the sea. It was destroyed in the earthquake of 1897 and has been rebuilt in a way more likely to withstand the shocks of earthquake.

Chief Commissioner, Sir Archdale Earle, K.C.I.E. appointed 1st April, 1912.

Personal Asst., Captain W. Lowry-Corry, I.A.

Chief Secretary, J. E. Webster, C.I.E.

Second Secretary, A. W. Botham.

Secretary, Public Works Department, F. O. Lechmere-Oertel

Officiating Inspector General of Registration, S. N. Mackenzie, I.C.S.

Judges, Henry Crawford Liddell, J. F. Graham.

Director of Public Instruction, J. R. Cunningham.

Inspector-General of Police, Lt.-Col. A. E. Woods.

Sanitary Commissioner, Major T. C. M. Young, M. B., I.M.S.

Comptroller, Financial Department, Philip Gordon, B.A.

Political Agent in Manikpur, John Comyn Higgins.

Superintendent and Remembrancer of Legal Affairs, Abdul Majid, B.A.

Director of Land Records and Agriculture, J. McSwiney.

Superintendent, Archæological Survey, Eastern Circle, D. B. Spooner.

Chief Inspector of Factories, R. P. Adams.

LEGISLATIVE COUNCIL.

Lieut.-Col. P. R. T. Gurdon, F. O. Oertel, Lieut.-Colonel D. Herbert, J. R. Cunningham, M.A, J.F. Graham, Abdul Majid, A. B. Hawkins, Rajendra Narayan Chaudhuri, Raj Nalini Kanta Ray Dastidar, Munshi Riaz Bakhsh, Col. H. E. Banatwala, J. E. Webster, A. W. Botham.

Elected Members.

Raj Ghanasyam Barua, Maulvi Saiyid Abdul Majid, Khan Bahadur, Maulvi Saiyid Muhammad Saadulla, Phanidhar Chaliha Raj Bahadur Mr. Tarun Ram Phukan, Ramani Mohan Das, Babu Radha Binod Das, Mr. R. St. J. Hickman, Muhammad Bakht Mazumdar, Khan Bahadur. Mr. H. Miller, Mr. H. B. Fox.

Chief Commissioners of Assam.

Colonel R. H. Keatinge, C.S.I.	1874
Sir S. C. Bayley, K.C.S.I.	1878
C. A. Elliot, C.S.I.	1881
W. E. Ward	1886
Dennis Fitzpatrick, C.S.I.	1888
J. Westland, C.S.I.	1887
J. W. Quinton, C.S.I.	1889
Brig.-General Sir H. Collett, K.C.B. ..	1891
W. E. Ward, C.S.I.	1891
C. J. Lyall, C.S.I.	1894
H. J. S. Cotton, C.S.I.	1896
J. B. Fuller, C.I.E.	1900
J. B. Fuller, C.I.E.	1902
C. W. Bolton, C.S.I.	1903

Note.—The Chief Commissionership of Assam was revived 1st April, 1912

Sir Archdale Earle, K.C.I.E	1912

Baluchistan.

Baluchistan is an oblong stretch of country occupying the extreme western corner of the Indian Empire. It is divided into three main divisions; (1) British Baluchistan with an area of 9,476 square miles consisting of tracts assigned to the British Government by treaty in 1879; (2) Agency Territories with an area of 44,345 square miles composed of tracts which have, from time to time, been acquired by lease or otherwise brought under control and placed directly under British officers; and (3) the Native States of Kalat and Las Bela with an area of 78,434 square miles. The Province embraces an area of 134,638 square miles and according to the census of 1911 it contains 834,703 inhabitants, divided roughly half and half between the administered districts and States.

The country, which is almost wholly mountainous, lies on a great belt of ranges connecting the Safed Koh with the hill system of Southern Persia. It thus forms a watershed the drainage of which enters the Indus on the east and the Arabian Sea on the south while on the north and west it makes its way to the inland lakes which form so large a feature of Central Asia. Rugged, barren, sun-burnt mountains, rent by high chasms and gorges, alternate with arid deserts and stony plains, the prevailing colour of which is a monotonous sight. But this is redeemed in places by level valleys of considerable size in which irrigation enables much cultivation to be carried on and rich crops of all kinds to be raised.

The political connection of the British Government with Baluchistan commenced from the outbreak of the First Afghan War in 1839; it was traversed by the Army of the Indus and was afterwards occupied until 1842 to protect the British lines of communication. The districts of Kachi, Quetta and Mastung were handed over to the Amir of Afghanistan and Political Officers were appointed to administer the country. At the close of the First Afghan War, the British withdrew and these districts were assigned to the Khan of Kalat. The founder of the Baluchistan Province as it now exists was Sir Roberts Sandeman who broke down the close border system and welded the Baluch and Brahui Chiefs into a close confederacy. In the Afghan War of 1879 Pishin, Sibi, Harnai and Thal-Chotiali were handed over by Yakub Khan to the British Government and retained at Sir Robert Sandeman's strenuous insistence.

Industries.

Baluchistan lies outside the monsoon area and its rainfall is exceedingly irregular and scanty. Shahrig which has the heaviest rainfall, records no more than 11¼ inches in a year. In the highlands few places receive more than 10 inches and in the plains the average rainfall is about 5 inches, decreasing in some cases to 3. The majority of the indigenous population are dependent for their livelihood on agriculture, provision and care of animals and transport. The Afghan and the Baluch, as a rule, cultivate their own lands. The Brahuis dislike agriculture and prefer a pastoral life. Previous to the advent of the British life and property were so insecure that the cultivator was fortunate if he reaped his harvest. The establishment of peace and security has been accompanied by a marked extension of agriculture which accounts for the increase in the numbers of the purely cultivating classes. The Mekran Coast is famous for the quantity and quality of its fish and the industry is constantly developing. Fruit is extensively grown in the highlands and the export is increasing.

Education is imparted in about 150 schools with over 4,000 scholars. The mineral wealth of the Province is believed to be considerable, but cannot be exploited until railways are developed. Coal is mined at Khost on the Sind-Pishin railway and in the Bolan Pass. Chromite is extracted in the Quetta-Pishin District, but the industry awaits the extension of the railway from Khanai to Hindubagh for its adequate exploitation. Lime-stone is quarried in small quantities. An oil-prospecting licence has been granted by the Las Bela State to the Burma Oil Company.

Administration.

The head of the local administration is the officer styled Agent to the Governor-General and Chief Commissioner. Next in rank comes the Revenue Commissioner who advises the Agent to the Governor-General in financial matters and generally controls the revenue administration. The keynote of administration in Baluchistan is self-government by the tribesmen, as far as may be, by means of their Jirgas or Councils of Elders along the ancient customary lines of tribal law, the essence of which is the satisfaction of the aggrieved and the settlement of the feud, not retaliation on the aggressor or the vindictive punishment of a crime. The district levies which normally numbered 2,300 odd play an unobtrusive but invaluable part in the work of the Civil Administration not only in watch and ward and the investigation of crime, but also in the carrying of the mails, the serving of processes and other miscellaneous work. In addition to these district levies there are ordinarily three irregular Corps in the Province: the Zhob Militia (formerly known as the Zhob Levy Corps), the Makran Levy Corps, and the Chagai Levy Corps. Their combined strength in the latest returns was 953 cavalry and 892 infantry. The Province does not pay for itself and receives large subsidies from the Imperial Government. The receipts and expenditure roughly balance each other at 29 lakhs.

ADMINISTRATION.

Agent to the Governor-General and Chief Commissioner, The Hon'ble Lieut.-Colonel Sir John Ramsay, K.C.I.E., C.S.I., I.A.

Revenue and Judicial Commissioner, H. R. C. Dobbs, C.S.I., C.I.E., I.C.S.

Secretary, Public Works Department, Colonel R. S. Maclagan, C.B., C.S.I.

First Assistant to the Agent to the Governor-General and Secretary to the Chief Commissioner, Major R. H. Chenevix-French.

Second Assistant to the Agent to the Governor-General, Captain G. B. Walker, I.A.

Political Agent, Zhob, Jacob, Lieut.-Colonel A. L., I.A.

Assistant Political Agent, Zhob, Major C. T. Daukes, I.A.

Political Agent, Kalat and Bolan Pass, Dew, Lieut.-Colonel A. B., C.I.E., I.A.

Assistant Political Agent, Kalat and Bolan Pass, (Vacant).

Assistant for Mekran to the Political Agent in Kalat and ex-officio Commandant, Mekran Levy Corps, Major T. G. M. Harris.

Political Agent and Deputy Commissioner, Quetta and Pishin, Major H. B. St. John, C.I.E., I.A.

Assistant Political Agent and Assistant Commissioner, Quetta and Pishin, J. H. Acheson, I.C.S.

Political Agent, Chagai, Major W. G. Hutchinson, I.A.

Political Agent and Deputy Commissioner, Sibi, Lieut.-Colonel F. McConaghey.

Assistant Political Agent, Sibi, T. J. C. Acton, I.C.S.

Political Agent, Loralai, Major A. D. G. Ramsay.

Residency Surgeon and Chief Medical Officer, Duke, Lieut.-Colonel A. L., I.M.S.

Civil Surgeon, Sibi, Dr. A. C. J. Elwin.

ANDAMAN AND NICOBAR ISLANDS.

This is a group of islands in the Bay of Bengal of which the headquarters are at Port Blair, by sea 780 miles from Calcutta, 740 miles from Madras and 360 miles from Rangoon, with which ports there is regular communication.

The land area of the islands under the administration is 3,143 square miles, namely, 2,508 square miles in the Andamans and 635 square miles in the Nicobars. The total population of the islands was returned in the census of 1911 as 26,459. The Islands are administered by the Chief Commissioner of the Andaman and Nicobar Islands who is also the Superintendent of the Penal Settlement. The penal settlement, which was established in 1858, is the most important in India.

Superintendent of Port Blair, Lieut.-Col. M. W. Douglas, C.I.E.

Acting Commandant and District Superintendent of Military Police, B. T. Roussac.

Medical Superintendent of Jails, and Senior Medical Officer, Major J. H. Murray, I.M.S.

COORG.

Coorg is a small petty Province in Southern India west of the State of Mysore. Its area is 1,582 square miles and its population 174,976. Coorg came under the direct protection of the British Government during the war with Sultan Tipu of Seringapatam. In May 1834, owing to misgovernment, it was annexed. The Province is directly under the Government of India and administered by the Chief Commissioner of Coorg who is the Resident in Mysore with his headquarters at Bangalore. In him are combined all the functions of a local government and a High Court. The Secretariat is at Bangalore where the Assistant Resident is styled Secretary to the Chief Commissioner of Coorg. In Coorg his chief authority is the Commissioner whose headquarters are at Mercara and whose duties extend to every branch of the administration. The chief wealth of the country is agriculture and especially the growth of coffee. Although owing to over-production and insect pests coffee no longer commands the profits it once enjoyed, the Indian output still holds its own against the severe competition of Brazil. The bulk of the output is exported to France.

Resident and Chief Commissioner, Coorg, The Hon. Mr. H. V. Cobb, C.S.I., C.I.E., I.C.S.

AJMER-MERWARA.

Ajmer-Merwara is an isolated British Province in Rajputana. The Agent to the Governor-General in Rajputana administers it as Chief Commissioner. The Province consists of two small separate districts, Ajmer and Merwara, with a total area of 2,711 square miles and a population of 501,395. At the close of the Pindari war Daulat Rao Scindia, by a treaty dated June 25, 1818, ceded the district to the British. Fifty-five per cent. of the population are supported by agriculture, the industrial population being principally employed in the cotton and other industries. The principal crops are maize, millet, barley, cotton, oil-seeds and wheat.

Agent to the Governor-General in Rajputana and Chief Commissioner of Ajmer-Merwara, The Hon. Lieut.-Col. Sir E. G. Colvin, K.C.S.I.

Aden was the first new territory added to the Empire after the accession of Queen Victoria. Its acquisition in 1839 was the outcome of an outrage committed by the local Fadhli chief upon the passengers and crew of a British buggalow wrecked in the neighbourhood. Various acts of treachery supervened during the negotiations regarding the bungalow outrage and Aden was captured by a force sent by the Bombay Government under Major Baillie. The act has been described as one of those opportune political strokes which have given geographical continuity to British possessions scattered over the world.

Aden is an extinct volcano, five miles long and three broad, jutting out to sea much as Gibraltar does, having a circumference of about 15 miles and connected with the mainland by a narrow isthmus of flat ground. This is nearly covered at one part at high spring tides, but the causeway and aqueduct are always above, though sometimes only just above, water. The highest peak on the wall of precipitous hills that surrounds the old crater which constitutes Aden is 1,775 feet above sea level. Rugged spurs, with valleys between, radiate from the centre to the circumference of the crater. A great gap has been rent by some volcanic disturbance on the sea surface of the circle of hills and this opens to the magnificent harbour. The peninsula of Little Aden, adjacent to Aden proper, was obtained by purchase in 1868 and the adjoining tract of Shaikh Othman, 39 square miles in extent, was subsequently purchased when, in 1882, it was found necessary to make provision for an over-flowing population.

Attached to the settlement of Aden are the islands of Perim, an island of 5 square miles extent in the Straits of Bab-el-Mandeb, in the entrance to the Arabian Sea; Sokotra island, at the entrance to the Gulf of Aden, in the Arabian Sea, acquired by treaty in 1886 and 1,382 miles in extent; and the five small Kuria Muria islands, ceded by the Imam of Maskat in 1854 for the purpose of landing the Red Sea cable, and otherwise valuable only for the guano deposits found upon them. They are off the Arabian coast about two-thirds of the way from Aden to Maskat. The whole extent of the Aden settlement, including Aden, Little Aden, Shaikh Othman and Perim, and subject to post-war adjustments, is approximately 80 miles. The 1911 census showed Aden, with Little Aden, Shaikh Othman, and Perim to have a population of 46,165. The population of Perim is a matter of a few hundreds, largely dependent on the Coal Depot maintained there by a commercial firm. That of Sokotra is 12,000, mostly pastoral and migratory inland, fishing on the coast.

Strategic Importance.

Aden's first importance is as a naval and military station of strategic importance. This aspect was ably discussed by Colonel A. M. Murray, in his "Imperial Outposts." He points out that Aden is not a naval base in the same sense that Gibraltar, Malta and Hong Kong were made, but a *point d'appui*, a rendezvous and striking point for the fleet. It was seized in 1839 because of its usefulness as a harbour of refuge for British ships and from a strategist's point of view this is its primary purpose and the *raison d'etre* of its forts and garrison. Aden under British rule has retained its ancient prestige as a fortress of impregnable strength, invulnerable by sea and by land, dominating the entrance to the Red Sea, and valuable to its owners as a commercial emporium, a port of call and a cable centre. The harbour extends 8 miles from east to west and 4 from north to south and is divided into two bays by a spit of land. The depth of water in the western bay is from 3 to 4 fathoms, across the entrance 4½ to 5 fathoms, with 10 to 12 fathoms 2 miles outside. The bottom is sand and mud. There are several islands in the inner bay. Strategic control of the Red Sea was rendered complete by the annexation of Perim and Sokotra, which may both be regarded as outposts of Aden, and are under the political jurisdiction of the Resident.

The Arab chiefs of the hinterland of Arabia are nearly all stipendiaries of the British Government. Colonel Wahab and Mr. G. H. Fitzmaurice, of the Constantinople Embassy, were appointed in 1902 as Commissioners to delimitate the frontier between Turkish Arabia and the British protectorate around Aden. A convention was signed in 1905 settling details; the frontier line being drawn from Shaikh Murad, a point on the Red Sea coast opposite Perim, to the bank of the river Bana, the eastern limit of Turkish claims, at a point some 29 miles north-east of Dthala, and thence north-east to the great desert. The area left within the British Protectorate was about 9,000 square miles. The arrangement gave to Turkey Cape Bab-el Mandeb, which forms the Arabian bank of the eastern channel past Perim into the Red Sea. England took this gatepost of the Red Sea from the Turks in November 1914. A sanitorium and small British garrison used to be maintained at Dthala, which is 7,700 feet high; but the garrison was withdrawn in 1906, Lord Morley explaining this step as being in accordance with the policy stated in the House of Lords in 1903,—that His Majesty's Government had never desired to interfere with the internal and domestic affairs of the tribes on the British side of the boundary, but had throughout made it plain that they would not assent to the interference of any other Power with those affairs. Affairs in this respect have been disarranged considerably by the war.

British Policy.

There has been much criticism of a policy under which Aden has failed to advance with the same progressive strides which have marked the development of other British dependencies. It is said that the former Persian possessors of Aden built its wonderful water tanks, and the Arabs made an aqueduct 20 miles long, while the British have done nothing except mount guns to protect their coal yards. Trade, it is argued, flourishes because this is a natural emporium of commerce, but not because of the attention its needs get from Government. Lord Roberts, writing on this point a few years ago said: "It is not creditable to British rule to make use of a dependency like Aden for selfish purposes of political necessity without attempting to extend the benefits of civilised Government to the neighbouring native tribes, especially when those tribes are living under the aegis of the British Crown. The Persians, the Turks and even the Arabs did more for Aden in their time than we have done during our seventy years' occupation.....Aden has always suffered under the disadvantage of being an

appanage of the Bombay Presidency, with which it has neither geographical, racial nor political affinity. Probably the best solution of the matter would be to hand over the place to the Colonial Office, relieving the Government of Bombay of a charge which is only looked upon as an incubus." Some important steps have been taken in the past few years to satisfy the commercial needs of the port.

Trade.

The trade of Aden has developed immensely since British acquisition in 1839, largely through the Government of India declaring it a free port in 1850, since when it has attracted much of the valuable trade between Arabia and Africa, formerly monopolised by the Red Sea ports of Hodeida and Mokha. The opening of the Suez Canal was also responsible for a large increase of trade through Aden into the interior. The total imports by sea in the last official year (1913-14) before the war set the course of progress awry amounted to £3,756,964; by land £170,213; treasure, £450,305; exports by sea were £ 3,267,283; by land, £140,159; treasure, £741,687. These statistics are exclusive of Government stores and treasure. In 1916-17, the total trade of the port showed an increase of £2,692,088—foreign trade increased from £5,626,658 to £7,079,026; Indian trade from £1,575,256 to £2,833,537. Land trade decreased from £158,285 to £139,724.

The language of the settlement is Arabic, but several other Asiatic tongues are spoken. The population is chiefly returned as Arabs and Shaikhs. The Somalis from the African coast and Arabs do the hard labour of the port. So far as the settlement is concerned there are no products whatever, with the important exception of salt. The crops of the tribal low country adjoining are jowar, sesamum, a little cotton, madder, a bastard saffron and a little indigo. In the hills, wheat, madder, fruit, coffee and a considerable quantity of wax and honey are obtained. The water supply forms the most important problem. Water is drawn from four sources—wells, aqueducts, tanks or reservoirs and condensers.

Administration.

The Aden settlement, was until last year subject politically to the Government of Bombay but it has now been handed over to the Foreign Office. Its administration is conducted by a Resident, who is assisted by four Assistants. The Resident is also ordinarily military Commandant and has hitherto usually been an officer selected from the Indian army, as have his assistants. The Resident has jurisdiction as a Judge of the Vice-Admiralty Court in matters connected with slave trading, his court being called the Colonial Court of the Admiralty. The laws in force in the settlement are generally speaking those in force in the Bombay Presidency, supplemented on certain points by special regulations to suit local conditions. The management of the port is under the control of a Board of Trustees formed in 1888. The principal business of the Port Trust has been the deepening of the harbour, so as to allow vessels of all sizes to enter and leave at all states of the tide. The Aden police force numbers slightly over 200 men. There are hospitals and dispensaries in both Aden and Perim, in addition to the military institutions of this character. The garrison comprises a troop of engineers, three companies of garrison artillery, one battalion of British infantry, two companies of sappers and miners and one Indian regiment. Detachments from the last named are maintained at Perim and Shaikh Othman respectively.

The average temperature of the station is 87 degrees in the shade, the mean range being from 75 in January to 98 in June, with variations up to 102. The lulls between the monsoons, in May and September are very oppressive. Consequently, long residence impairs the faculties and undermines the constitution of Europeans and even Indians suffer from the effects of too long an abode in the settlement, and troops are not posted in the station for long periods, being usually sent there one year and relieved the next. But Aden is exceptionally free from infectious diseases and epidemics, and the absence of vegetation, the dryness of the soil and the purity of the drinking water constitute efficient safeguards against many maladies common to tropical countries. The annual rainfall varies from ¼ inch to 8¼ inches, with an irregular average of 3 inches.

The War.

At the outset of the war the Turks established themselves on the Arabian shore of the straits of Bab-el-Mandeb. They were driven off, their fort captured and then guns taken, by a force landed from a British warship. But in July, 1915, a mixed force of Turks and Arabs advanced against the Aden Settlement. News was made known in India by a Reuter telegram of July 9th, which said that the Turks and Arabs threatened Lahej, that at the request of the Sultan of Lahej a force was sent for the protection of his capital, and that the supporting force was so beset with water and transport difficulties that it was decided to retire, and the whole force withdrew to Aden, the enemy declining to follow. Subsequently came an official intimation that the Sultan of Lahej who had been grievously wounded in a fight against the raiding force had died in Aden whither he had been taken for surgical treatment. The Government of India announced on July 22nd that on the morning of the 21st instant a force from the Aden Garrison attacked the position taken by the Turks, a few miles outside the settlement, and drove them from it, the pursuit being continued for a distance of five miles. No further detailed information on the matter has been made public, but Earl Curzon stated in the House of Lords on December 4th last that the British forces were then holding an arc at about 11 miles from Aden and that so far as was known the Turks in the vicinity had no direct communication with Turkey and had not received supplies or reinforcements.

The following are the principal officers of the present administration:—

Political Resident, Major-General James Marshall Stewart, C.B.

Assistant Residents, Major C. E. Barton (Perim), Lieut.-Colonel H. F. Jacob, Captain B. R. Reilly, Lieut.-Colonel W. Beale,

The area enclosed within the boundaries of India is 1,773,168 square miles, with a population of 315,132,537 of people—nearly one-fifth of the human race. But of this total a very large part is not under British Administration. The area covered in the Native States is 675,267 square miles with a population of seventy millions. The Native States embrace the widest variety of country and jurisdiction. They vary in size from petty states like Lawa, in Rajputana, with an area of 19 square miles, and the Simla Hill States, which are little more than small holdings, to States like Hyderabad, as large as Italy, with a population of thirteen millions. They include the inhospitable regions of Western Rajputana, Baroda, part of the Garden of India, Mysore, rich in agricultural wealth, and Kashmir, one of the most favoured spots on the face of the globe. In the case of 175 States control is exercised by the Government of India, and of about 500 by the Provincial Governments. The four principal states, Hyderabad, Mysore, Baroda and Kashmir, are in direct relation with the Government of India. The other States are grouped under the direction of an Agent to the Governor-General, as for Rajputana and Central India; in one case the Provincial Government has been compelled to group its States, those of Kathiawar, under an Agent to the Governor.

Relations with the Paramount Power.

So diverse are the conditions under which the Native States were established and came into political relation with the Government of India, that it is impossible even to summarise them. But broadly it may be said that as the British boundaries expanded, the states came under the influence of the Government and the rulers were confirmed in their possessions. To this general policy however there was, for a brief period, an important departure. During the regime of Lord Dalhousie the Government introduced what was called annexation through lapse. That is to say, when there was no direct heir, the Government considered whether public interests would be secured by granting the right of adoption. Through the application of this policy, the states of Satara and of Nagpur fell in to the East India Company, and the kingdom of Oudh was annexed because of the gross misgovernment of its rulers. Then came the Mutiny. It was followed by the transference of the dominions of the East India Company to the Crown, and an irrevocable declaration of policy toward the Native States. In the historic Proclamation of Queen Victoria it was set out that "We desire no extension of our present territorial possessions; and while we will permit no aggression on our dominions or our rights to be attempted with impunity, we shall allow no encroachments on those of others. We shall respect the rights, dignity and honour of the Native Princes as our own; and we desire that they, as well as our own subjects, should enjoy that prosperity and that social advancement which can only be secured by internal peace and good government." Since the issue of that proclamation there has been no encroachment on the area under Native rule by the Government of India. On the contrary, the movement has been in the opposite direction. In 1881 the State of Mysore, which had been so long under British administration that the traditions of Native rule were almost forgotten, was restored to the old Hindu ruling house. In 1911 the Maharajah of Benares, the great taluqdar of Oudh, was granted ruling powers over his extensive possessions. On many occasions the Government of India has had to intervene, to prevent gross misgovernment, or to carry on the administration during a long minority; but always with the undeviating intention of restoring the territories as soon as the necessity for intervention passed. Almost all states possess the right of adoption in default of heirs.

Rights of Native States.

The rights and obligations of the Native States are thus described by the Imperial Gazetteer. The Chiefs have, without exception, gained protection against dangers from without and a guarantee that the protector will respect their rights as rulers. The Paramount Power acts for them in relation to foreign Powers and other Native States. The inhabitants of the Native States are the subjects of their rulers, and except in case of personal jurisdiction over British subjects, these rulers and their subjects are free from the control of the laws of British India. Criminals escaping to a Native State must be handed over to it by its authorities; they cannot be arrested by the police of British India without the permission of the ruler of the State. The Native Princes have therefore a suzerain power which acts for them in all external affairs, and at the same time scrupulously respects their internal authority. The suzerain also intervenes when the internal peace of their territories is seriously threatened. Finally they participate in all the benefits which the protecting power obtains by its diplomatic action, or by its administration of its own dominions, and thus secure a share in the commerce, the railways, the ports, and the markets of British India. Except in rare cases, applied to maritime states, they have freedom of trade with British India although they levy their own customs, and their subjects are admitted to most of the public offices of the British Government.

Obligations of Native States.

On the other hand the Native States are under an obligation not to enter into relations with foreign nations or other states; the authority of their rulers has no existence outside their territories. Their subjects outside their dominions become for all intents and purposes British subjects. Where foreign interests are concerned, the Paramount Power must act so that no just cause of offence is given by its subordinate allies. All Native States alike are under an obligation to refer to the British every question of dispute with other states. Inasmuch as the Native States have no use for a military establishment other than for police, or display, or for co-operation with the Imperial Government, their military forces, their equipment and armament are prescribed by the Paramount Power. Although old and unaltered treaties declare that the British Government will have no manner of concern with any of a Maharajah's dependents or servants, with respect to whom the Maharajah is absolute, logic and public opinion

have endorsed the principle which Lord Canning set forth in his minute of 1860, that the "Government of India is not precluded from stepping in to set right such serious abuses in a Native Government as may threaten any part of the country with anarchy or disturbance, nor from assuming temporary charge of a Native State when there shall be sufficient reason to do so." Of this necessity the Governor-General in Council is the sole judge, subject to the control of Parliament. Where the law of British India confers jurisdiction over British subjects or other specified persons in foreign territory, that power is exercised by the British courts which possess it. The subjects of European Powers and the United States are on the same footing. Where cantonments exist in Native territory, jurisdiction both over the cantonment and the civil station is exercised by the suzerain power.

Political Officers.

The powers of the British Government are exercised through Political Officers who as a rule reside in the states themselves. In the larger states the Government is represented by a Resident, in groups of states by an Agent to the Governor-General, assisted by local Residents or Political Agents. These officers form the sole channel of communication between the Native States and the Government of India and its Foreign Department, with the officials of British India and with other Native States. They are expected to advise and assist the Ruling Chiefs in any administrative or other matters on which they may be consulted. Political Agents are similarly employed in the larger States under the Provincial Governments, but in the petty states scattered over British India the duties of the Agent are usually entrusted to the Collector or Commissioner in whose district they lie. All questions relating to the Native States are under the special supervision of the Supreme Government, and in the personal charge of the Governor-General. A proposal has been made by the Government of India that, in view of the increasing importance of the Native States, an additional Secretary, styled the Political Secretary, shall be appointed who shall be in special charge, under the Viceroy, of these questions.

Closer Partnership.

Events have tended gradually to draw the Paramount Power and the Native States into closer harmony. Special care has been devoted to the education of the sons of Ruling Chiefs, first by the employment of tutors, and afterwards by the establishment of special colleges for the purpose. These are now established at Ajmere, Rajkot, Indore and Lahore. The Imperial Cadet Corps whose headquarters are at Dehra Dun, imparts military training to the scions of the ruling chiefs and noble families. The spread of higher education has placed at the disposal of the Native States the products of the Universities. In these ways there has been a steady rise in the character of the administration of the Native States, approximating more closely to the British ideal. Most of the Native States have also come forward to bear their share in the burden of Imperial defence. Following on the spontaneous offer of military assistance when war with Russia appeared to be inevitable over the Penjdeh incident in 1885, the states have raised a portion of their forces up to the standard of the Native troops in the Indian Army. These are termed Imperial Service Troops; they belong to the states; they are officered by Indians; but they are inspected by a regular cadre of British officers; under the general direction of the Inspector-General of Imperial Service Troops. Their numbers are approximately 22,000 men; their armament is the same as that of the Indian Army and they have done good service often under their own Chiefs, on the Frontier and in China and in Somaliland. Secure in the knowledge that the Paramount Power will respect their rights and privileges, the Ruling Chiefs have lost the suspicion which was common when their position was less assured, and the visits of the Prince of Wales in 1875, of the Prince and Princess of Wales in 1905-06, and of the King and Queen in 1911-12 have tended to seal the devotion of the great feudatories to the Crown. The improvement in the standard of native rule has also permitted the Government of India largely to reduce the degree of interference in the internal affairs of the Native States. The new policy was authoritatively laid down by Lord Minto, the then Viceroy, in a speech at Udaipur in 1909, when he said:—

"Our policy is with rare exceptions, one of non-interference in the internal affairs of the Native State. But in guaranteeing their internal independence and in undertaking their protection against external aggression it naturally follows that the Imperial Government has assumed a certain degree of responsibility for the general soundness of their administration and could not consent to incur the reproach of being an indirect instrument of misrule. There are also certain matters in which it is necessary for the Government of India to safeguard the interests of the community as a whole as well as those of the paramount power, such as railways, telegraphs and other services of an Imperial character. But the relationship of the Supreme Government to the State is one of suzerainty. The foundation-stone of the whole system is the recognition of identity of interests between the Imperial Government and Durbars and the minimum of interference with the latter in their own affairs."

HYDERABAD.

Hyderabad, the premier Native State in India, is in the Deccan. Its area is 82,698 square miles and population 13,374,676. The general physical characteristics of the State are an elevated plateau, divided geographically and ethnologically by the Manjra and Godaveri rivers. To the North-West is the Trappean region, peopled by Marathas, a country of black cotton soil, producing wheat and cotton. To the South-East is the granatic region of the Telugus and producing rice.

HISTORY.—In pre-historic times Hyderabad came within the great Dravidian zone. The date of the Aryan conquest is obscure, but the dominions of Asoka 272 to 231 B.C. embraced the northern and western portions of the State. Three great Hindu dynasties followed, those of the Pallavas, Chalukyas and Yadavas. In

1294 the irruption of the Mahomedans under Ala-ud-din Khilji, commenced, and thenceforward till the time of Aurungzebe the history of the State is a confused story of struggles against the surviving Hindu kingdom of the South, and after the fall of Vijayanagar, with each other. Aurungzebe stamped out the remains of Mahomedan independence of the South, and set up his General, Asaf Jah, of Turcoman descent, as Viceroy, or Subhadar of the Deccan in 1713. In the chaos which followed the death of Aurungzebe, Asaf Jah had no difficulty in establishing and maintaining his independence, and thus founded the present House. During the struggle between the British and the French for mastery in India, the Nizam finally threw in his lot with the British, and unshaken even by the excitement of the mutiny, has been so staunch to his engagements as to earn the title of "Our Faithful Ally." The present ruler is H. H. Sir Usman Ali Khan Bahadur Fateh Jung, G.C.S.I.

THE BERARS.—A most important event in the history of the State occurred in November 1902, when the Assigned Districts of Berar were leased in perpetuity to the British Government. These districts had been administered by the British Government on behalf of the Nizam since 1853; under the treaties of 1853 and 1860, they were "assigned" without limit of time to the British Government to provide for the maintenance of the Hyderabad contingent, a body of troops kept by the British Government for the Nizam's use, the surplus revenues, if any, being payable to the Nizam. In course of time it had become apparent that the maintenance of the Hyderabad contingent on its old footing as a separate force was inexpedient and unnecessary, and that similarly the administration of Berar as a separate unit was very costly, while from the point of view of the Nizam, the precarious and fluctuating nature of the surplus was financially inconvenient. The agreement of 1902 re-affirmed, His Highness' sovereignty over Berar, which instead of being indefinitely "assigned" to the Government of India, was leased in perpetuity to an annual rental of 25 lakhs (nearly £167,000); the rental is for the present charged with an annual debit towards the repayment of loans made by the Government of India. The Government of India were at the same time authorised to administer Berar in such manner as they might think desirable, and to redistribute, reduce, re-organise and control the Hyderabad Contingent, due provision being made, as stipulated in the treaty of 1853, for the protection of His Highness' dominions. In accordance with this agreement the Contingent ceased in March 1903 to be a separate force and was re-organised and redistributed as an integral part of the Indian Army, and in October 1903 Berar was transferred to the administration of the Chief Commissioner of the Central Provinces.

ADMINISTRATION.—The Nizam is supreme in the State and exercises the power of life and death over his subjects. For convenience in administration the Minister is the chief controlling authority in the State. To assist him there are four Assistant Ministers, Financial and Public Works, Judicial, Military and Ecclesiastical. All questions of importance are referred to the Council, which is composed of the Minister as President, and the Assistant Ministers as Members. Business disposed of by the Council is immediately reported to the Nizam. The actual work of the departments is done by six Secretaries. Below the Secretariat the State is divided into Subhas or Divisions, Districts and Talukas. Fifteen District, 88 Taluk and nine Divisional Boards are at work in the District. A Legislative Council, consisting of 23 members, of whom 12 are official and 11 non-official, is responsible for making laws. The State maintains its own currency, the Osmania Sicca rupee with a subordinate coinage. In 1904 an improved Mahbubia rupee was struck and this exchanges with the British rupee at the ratio of 115 or 116 to 100. It has its own postal system and stamps for internal purposes. It maintains its own Army, comprising 17,347 troops, of which 5,980 are classed as Regular and 11,367 as Irregular. There are in addition 1,271 Imperial Service Troops.

FINANCE.—After many vicissitudes, the financial position of the State is strong. The current budget provides for a revenue of Rs. 605 lakhs and a service expenditure of Rs. 520 lakhs. The principal revenue heads are Land Revenue 293 lakhs, Berar rent (land leased in perpetuity to the British Government and incorporated in the Central Provinces) 25 lakhs; Customs, etc., 70 lakhs; Excise 102 lakhs; Interest 35 lakhs.

PRODUCTION AND INDUSTRY.—The principal industry of the State is agriculture, which maintains 57·1 per cent. of the population. The common system of land tenure is ryotwari. As no reliable figures are available to show the gross produce it is impossible to say what proportion the land revenue bears to it, but it is collected without difficulty. The principal food crops are millet and rice; the staple money crops cotton, which is grown extensively on the black cotton soils, and oil-seeds. The State is rich in minerals. The great Warangal coal measures are worked at Singareni, but the efforts to revive the historic gold and diamond mines have met with very qualified success. The manufacturing industries are consequent on the growth of cotton, and comprise three spinning and weaving mills and ginning and pressing factories in the cotton tracts.

COMMUNICATIONS.—One hundred and thirty-seven miles of the broad gauge line from Bombay to Madras traverse the State. At Wadi, on this section, the broad gauge system of the Nizam's Guaranteed State Railway takes off, running East to Warangal and South-East toward Bezwada, a total length of 330 miles. From Hyderabad the metre gauge Godaveri Railway runs North-West to Manmad on the Great Indian Peninsula Company's system 391 miles. There are thus 471 miles of broad gauge and 391 of metre in the State. The Barsi Light Railway owns a short extension to Latur. The roads are generally inferior.

EDUCATION.—The State maintains two Colleges. The Nizam College at Hyderabad (first grade) is affiliated to the Madras University. The Oriental College at Hyderabad prepares students for the local Moulvi and Munshi examinations. There are 21 high schools, 80 middle schools, 1,041 primary schools, and 22 special schools including a Medical School in the Dominions.

British Resident—Mr. S. M. Fraser, C.S.I., C.I.E.

MYSORE.

The State of Mysore is surrounded on all sides by the Madras Presidency except on the north and north-west where it is bounded by the districts of Dharwar and North Canara respectively and towards the south-west by Coorg. It is naturally divided into two regions of distinct character; the hill country (the Malnad) on the west and the wide-spreading valleys and plains (the Maidan) on the east. The State has an area of 29,461 square miles excluding that of the Civil and Military Station of Bangalore and a population of 5,705,359, of whom over 92 per cent. are Hindus. Kanarese is the distinctive language of the State.

HISTORY.—The ancient history of the country is varied and interesting. Tradition connects the table-land of Mysore with many a legend enshrined in the great Indian epics, the Ramayana and the Mahabharata. Coming down to historical times, the north-eastern portion of the country formed part of Asoka's Empire in the third century B. C. Mysore then came under the rule of the Andhra dynasty. From about the third to the eleventh century A. D. Mysore was ruled by three dynasties, the north-western portion by the Kadambas, the eastern and northern portions by the Pallavas and the central and southern portions by the Gangas. In the eleventh century, Mysore formed part of the Chola dominion, but the Cholas were driven out early in the twelfth century by the Hoysalas, an indigenous dynasty with its capital at Halebid. The Hoysala power came to an end in the early part of the fourteenth century. Mysore was next connected with the Vijayanagar Empire. At the end of the fourteenth century, Mysore became associated with the present ruling dynasty. At first tributary to the dominant empire of Vijayanagar, the dynasty attained its independence after its downfall in 1565. In the latter part of the eighteenth century the real sovereignty passed into the hands of Haidar Ali and then his son Tippu Sultan. In 1799, on the fall of Seringapatam, the British Government restored the State comprised within its present limits, to the ancient dynasty in the person of Maharaja Sri Krishnaraja Wadiyar Bahadur III. Owing to the insurrections that broke out in some parts of the country, the management was assumed by the British Government in 1831. In 1881, the State was restored to the dynasty in the person of Sri Chamarajendra Wadiyar Bahadur under conditions and stipulations laid down in the Instruments of Transfer. That ruler, with the assistance of Mr. (afterwards Sir) K. Seshadri Iyer, K.C.S.I., as Dewan, brought Mysore to a state of great prosperity. He died in 1894 and was succeeded by the present Maharaja Sir Sri Krishnaraja Wadiyar Bahadur, G.C.S.I., who was installed in 1902. In November 1913, the Instrument of Transfer was replaced by a Treaty which indicates more appropriately the relation subsisting between the British Government and the State of Mysore.

ADMINISTRATION.—The city of Mysore is the capital of the State, but Bangalore City is the administrative head quarters. His Highness the Maharaja is the ultimate authority in the State and the administration is conducted under his control, by the Dewan and three Members of the Council including the Extraordinary Member. The Chief Court consisting of three Judges is the highest judicial tribunal in the State. A Representative Assembly meets twice a year at Mysore—once in October during the Dasara and a second time during the latter part of April. In the October Session the Dewan presents to the Assembly an account of the Finances of the State of the preceding Official year and deals also with the more important administrative measures. Representations about wants and grievances are heard and discussed. In the April Session the Budget for the ensuing year is placed before the Assembly and its opinion invited. Such of the representations of the October Session as were not heard for want of time are taken up and discussed along with the fresh subjects brought up. There is also a Legislative Council consisting of 25 members, of whom 12 are officials, and 13 non-officials, eight elected and five nominated. The Council has recently been given the privileges of interpellation and discussion of the State budget. All the important branches of the administration are controlled by separate heads of departments. For administrative purposes, the State is divided into 8 districts and subdivided into 68 talukas, each district being under a Deputy Commissioner and District Magistrate and each taluk under an Amildar and subordinate Magistrate. The State maintains a military force of 3,680 including 921 in the Imperial Service Regiment (Cavalry) and 550 in the Imperial Service Transport Corps, which are on active service.

The cash balance at the beginning of 1917-18 was 66 lakhs. Total receipts during the year 1916-17, were Rs. 293 lakhs and total disbursement 292 lakhs. The principal revenue heads are:—Land Revenue Rs. 108 lakhs; Mining Royalty Rs. 17 lakhs; Forest revenue Rs. 47 lakhs; Excise Rs. 59 lakhs; Stamps Rs. 12 lakhs; Railways Rs. 15 lakhs; and Electric Power Rs. 12 lakhs. Mysore pays an annual subsidy of Rs. 35 lakhs to the British Government besides contributing indirectly to the British Revenues under Customs and Salt.

ECONOMIC CONFERENCES.—The Mysore Economic Conference was organised in June 1911 with the object of creating and keeping alive public interest in matters connected with the economic progress of the State by a frequent interchange of views and discussions among those competent to deal with them and in order to associate men of enlightenment, public spirited citizens, prominent agriculturists, merchants and others with the officers of Government in such deliberations. The Conference meets annually at Mysore during the festivities in connection with His Highness the Maharaja's birthday. The Dewan is the President of the Conference. It has three Central Committees dealing with questions connected with Agriculture, Education and Industries and Commerce, District Committees in the several districts, and progress committees in talukas and towns. Under the auspices of the Conference a monthly Journal is issued in English and a weekly paper in

Kanuada, and bulletins on important subjects are periodically issued.

AGRICULTURE.—Nearly three-fourths of the population are employed in agriculture and the general system of land tenure is Ryotwari. The principal food crops are rabi, rice, jola, millets, gram and sugarcane and the chief fibres are cotton and san-hemp. Over 28,000 acres are under mulberry, the silk industry being the most profitable in Mysore next to gold mining. A Director of Seri-culture has recently been appointed, arrangements are being made for the supply of disease per seed and a central and 6 Taluka Popul Schools have been started. The Department of Agriculture which was recently reorganised on a large scale is popularising agriculture on scientific lines by means of demonstrations, investigations and experiments. There is one Central Farm at Hebbal to deal with all classes of crops and two others, one at Hiriyur in connection with cotton and crops suited to localities where the rainfall is light and the other at Marathur in the region of heavy rainfall. A Sugarcane Farm has been opened under the new Krishnarajasagara Works.

Industries and Commerce.—A Department of Industries and Commerce was organised in 1913 with a view to the development of Industries and Commerce in the State. Its main functions are stimulating private enterprise by the offer of technical advice and other assistance for starting new industries, undertaking experimental work for pioneering industries and developing existing industries and serving as a general bureau of information in industrial and commercial matters. A system of granting loans for the purchase of machinery and appliances has been introduced in the State. The manufacturing industries include two cotton mills, two woollen mills, twelve cotton ginning mills, three cotton presses, and three silk filatures. There are also four oil mills, eleven rice mills, nine sugar mills, four brick and tile factories, three cigar factories, three tanneries, fifteen mechanical workshops, two distilleries, one silk reeling house, twelve flour mills, three bone-meal factories, three coffee curing works, four dyeing factories, two hosieries, one brewery, twelve iron and brass foundries, one lacquer work factory, two taxidermic works, four saw-mills, one weaving factory, one Pharmaceutical works, one wood turning and one art Lithographic press. In addition there are fifty-four pumping plants for irrigation. The Sandalwood Oil Factory started on an experimental basis is now working on a commercial scale. Arrangements are in progress to start a large factory at Mysore. Government have sanctioned a scheme for the manufacture of paper pulp from bamboos. Preliminary investigations have been completed for establishing wood distillation and iron works in the State. Local Syndicates have been formed at Davangere and Mysore for establishing cotton mills at those places. A button factory has just been started and necessary steps are being taken for starting a soap factory. An Arts and Crafts Depot has been opened to give special encouragement for inlay workers, sandalwood carvers and to those engaged in preparing high class silk, lace clothes and metal works. A Home Industries Institute has been established at Bangalore. The establishment of a Central District and Commercial Museum at Mysore and District Museums at District Headquarters has been sanctioned. A Chamber of Commerce has been established at Bangalore with branches at important trade centres.

BANKING.—In 1913, a State-aided bank called the Bank of Mysore was started with its head quarters in Bangalore and agencies at many of the important places in the State. Besides this there are one Provincial Bank, 2 District Banks, 15 Federal Banking Unions and 800 Co-operative Societies working with a total working Capital of Rs. 44,21,688.

COMMUNICATIONS.—The Railway system radiates from Bangalore, various branches of the Madras and Southern Mahratta Railway running through the State. The length of the lines owned by the State and worked under contract by the Company is 411·17 miles, of which 9·88 are of broad gauge and the rest metre gauge. The Kolar District Board Railway (84 miles) and the Bangalore-Chick Ballapur Light Railway (35 miles) both of 2'-6" gauge together with a tramway from Tarikere to Narasimharajapura (27 miles) 2 feet gauge have been opened and are being worked by State Agency.

A metre gauge line from Mysore to Arsikere *via* Hassan 102·3 miles in length is now under construction. The works are almost complete and the line is expected to be opened for traffic shortly. Several other projects were under Survey and investigation during the year and some of them are about to be taken up for construction in the near future.

EDUCATION.—A separate University for Mysore has been started from 1st July 1916. It is of the teaching and residential type composed of the Central College at Bangalore, and the Maharaja's College at Mysore, with headquarters at Mysore. An important feature is that students will undergo a course of three years in the University, but they will be admitted to the University only after a year's training in collegiate High Schools. The two colleges are efficiently equipped and organised and there is a training college for men located at Mysore. There is also a college for women at Mysore, *i.e.*, the Maharani's College.

With the introduction of compulsory education in select towns and the increase in the number of village schools, primary education has during recent years made considerable advance. Schools have been started for imparting instruction in agricultural, commercial, engineering and other technical subjects. Adult education and vacational training have also been taken in hand. There were altogether in 1914-15, 4,278 public and 1,859 private educational institutions in the State. This gives one school to every 1·89 square miles of the area and to every 930 inhabitants.

PLACES OF INTEREST.—Mysore City, the capital, is a modern city laid out with fine roads and suburbs. The prominent buildings are the Palace, the Chamarajendra Technical Institute, Government House, the Maharaja's

College, the Maharani's College and the Oriental Library.

Bangalore, the largest city in the State and the commercial and manufacturing centre, stands on a table land, 3,000 feet above the sea and is noted for its salubrious climate and luxuriant gardens. The principal places of interest are the Public Offices, the Central College buildings, the Museum, the Lal Bagh, the Indian Institute of Science and the Indian Sanskrit Institute.

The historic town of Seringapatam, the famous Jog Falls, the Kolar Gold Fields, the Sivasamudram Falls, and Belur, Somnathpur and Halebid with their temples of exquisite architecture, are some of the other important places of interest in the State.

Resident in Mysore and Chief Commissioner of Coorg.—H.V. Cobb, C.S.I., C.I.E.,

Dewan.—Sir M. Visveswaraya, B.A., K.C.I.E.

BARODA.

The State of Baroda is situated partly in Gujarat and partly in Kathiawar. It is divided into four distinct blocks: (1) the southern district of Navsari near the mouth of the Tapti river; and mostly surrounded by British territory; (2) central district, North of the Narbada, in which lies Baroda, the capital city; (3) to the North of Ahmedabad, the district of Kadi; and (4) to the West, in the Peninsula of Kathiawar, the district of Amreli, formed of scattered tracts of land. The area of the State is 8,182 square miles; the population is over two millions, of whom over four-fifths are Hindus.

HISTORY.—The history of the Baroda State as such dates from the break-up of the Mughal Empire. The first Maratha invasion of Gujarat took place in 1705, and in this and later incursions Pilaji Gaikwar, who may be considered as the founder of the present ruling family, greatly distinguished himself. Songhad was the headquarters till 1766. Since 1723 Pilaji regularly levied tribute in Gujarat. His son Damaji finally captured Baroda in 1734, since when it has always been in the hands of the Gaikwars; but Mughal authority in Gujarat did not end until the fall of Ahmedabad in 1753, after which the country was divided between the Gaikwar and the Peshwa. In spite of the fact that Damaji was one of the Maratha chiefs defeated at Panipat by Ahmed Shah, he continued to add to his territory. He died in 1768, leaving the succession in dispute between two rival sons. He was succeeded in turn by his sons Savaji Rao I. Fattesing Rao, Manaji Rao and Govind Rao. The last died in 1800, and was succeeded by Anand Rao. A period of political instability ensued which was ended in 1802 by the help of the Bombay Government, who established the authority of Anand Rao at Baroda. By a treaty of 1805 between the British Government and Baroda, it was arranged *inter alia* that the foreign policy of the State should be conducted by the British, and that all differences with the Peshwa should be similarly arranged. Baroda was a staunch ally of the British during the wars with Baji Rao Peshwa, the Pindari hordes and Holkar. But from 1820 to 1841, when Sayaji Rao II. was Gaikwar, differences arose between the two Governments, which were settled by Sir James Carnac, Governor of Bombay in 1841. Ganpat Rao succeeded Sayaji Rao in 1847. During his rule, the political supervision of Baroda was transferred to the Supreme Government. His successor Khande Rao, who ascended the *Gadi* in 1856, introduced many reforms. He stood by the British in the Mutiny. He was succeeded by his brother Malhar Rao in 1870. Malhar Rao was deposed in 1875 for "notorious misconduct" and "gross misgovernment," but the suggestion that he had instigated the attempt to poison Col. Phayre, the Resident, was not proved. Sayaji Rao III., a boy of 13 years of age, who was descended from a distant branch of the family, was adopted as heir of Khande Rao in 1875 and is the present Gaikwar. He was invested with full powers in 1881.

ADMINISTRATION.—An executive council, consisting of the principal officers of the State, carries on the administration, subject to the control of the Maharaja, who is assisted by a Dewan and other officers. A number of departments have been formed, which are presided over by officials corresponding to those in British India. The State is divided into four *prants* each of which is subdivided into *Mahals* and *Peta Mahals* of which there are in all 42. Attempts have for some years been made to restore village autonomy, and village panchayats have been formed which form part of a scheme for local self-government. There is a Legislative Department, under a Legal Remembrancer, which is responsible for making laws. There is also a Legislative Council, consisting of nominated and elected members. A High Court at Baroda possesses jurisdiction over the whole of the State and hears all final appeals. From the decisions of the High Court, appeals lie in certain cases, to the Maharaja, who decides them on the advice of the Huzur Nyaya Sabha. The State Army consists of 5,084 Regular forces and 3,806 Irregular forces.

FINANCE.—In 1915-16, the total receipts of the State were Rs. 191 lakhs and the disbursements Rs. 167 lakhs. The principal Revenue heads were:—Land Revenue, Rs. 96 lakhs; Abkari, Rs. 22 lakhs; Opium, Rs. 17 lakhs; Railways, Rs. 9 lakhs; Interest Rs. 9 lakhs; Tribute from other States, Rs. 14 lakhs. British Currency was introduced in 1901.

PRODUCTION AND INDUSTRY.—Agriculture and pasture support 63 per cent. of the people. The principal crops are rice, wheat, gram, castor-oil, rapeseed, poppy, cotton, san-hemp, tobacco, sugarcane, maize, and garden crops The greater part of the State is held on *ryotwari* tenure. The State contains few minerals, except sandstone, which is quarried at Songir, and a variety of other stones which are little worked. There are 34 industrial or commercial concerns in the State registered under the State Companies' Act. There are four Agricultural Banks and 323 Co-operative Societies in Baroda.

COMMUNICATIONS.—The B. B. & C. I. Railway crosses part of the Navsari and Baroda *prants*, and the Rajputana-Malwa Railway passes through the Kadi *prant*. A system of branch lines has been built by the Baroda Durbar in all the four *prants*, in addition to which the Tapti Valley Railway and the Baroda-Godhra Chord line (B. B. & C. I.) pass through the State. The Railways constructed by the State are about 500 miles in length and 125 miles are under construction. Good roads are not numerous.

EDUCATION.—The Education Department controls 2,719 institutions of different kinds, in 62 of which English is taught. The Baroda College is affiliated to the Bombay University. There are a number of high schools, technical schools, and schools for special classes, such as the jungle tribes and unclean castes The State is "in a way pledged to the policy of free and compulsory primary education." It maintains a system of rural and travelling libraries. Ten per cent. of the population is returned in the census as literate. Total expense on Education is about Rs. 20 lakhs.

CAPITAL CITY.—Baroda City with the cantonment has a population of 99,345. It contains a public park, a number of fine public buildings, palaces and offices; and it is crowded with Hindu temples. The cantonment is to the North-west of the city and is garrisoned by an infantry battalion of the Indian Army. An Improvement Trust has been formed to work in Baroda City and has set itself an ambitious programme.

RULER.—His Highness Farzand-i-Khas-i-Dowlat-i-Englishia Maharaja Sir Sayaji Rao Gaekwar Sena Khas Khel, Samsher Bahadur, G.C.S.I., Maharaja of Baroda.

Resident—Lt.-Col. F. W. P. Macdonald.

Dewan—Manubhai N. Mehta.

BALUCHISTAN AGENCY.

In this Agency are included the Native States of Kalat, Kharan and Las Bela. The Khan of Kalat is head of the Baluchistan tribal chiefs whose territories are comprised under the following divisions:—Jhalawan, Sarawan, Makran, Kachhi and Domki-Kaheri-Umrani. These districts form what may be termed Kalati Baluchistan, and occupy an area of 54,713 square miles. The inhabitants of the country are either Brahuis or Baluchis, both being Mahomedans of the Sunni sect. The country is sparsely populated, the total number being about 336,423. It derives its chief importance from its position with regard to Afghanistan on the north-western frontier of British India. The relations of Kalat with the British Government are governed by two treaties of 1854 and 1876, by the latter of which the Khan agreed to act in subordinate co-operation with the British Government. There are, however, agreements with Kalat in connection with the construction of the Indo-European telegraph, the cession of jurisdiction on the railways and in the Bolan Pass, and the permanent lease of Quetta, Nushki and Nasirabad. The Khan is assisted in the administration of the State by a Political Adviser lent by the British Government. The Governor-General's Agent in Baluchistan conducts the relations between the Government of India and the Khan, and exercises his general political supervision over the district. The revenue of the State is about Rs.10,47,214. The present Khan is, His Highness Mir Sir Mahmud Khan of Kalat, G.C.I.E. He was born in 1864.

Kharan extends in a westerly and south-westerly direction from near Nushki and Kalat to the Persian border. Its area is 18,565 square miles, it has a population of 22,663 and an annual average revenue of about Rs. 90,000.

The Chief of Kharan, Sardar Sir Nauroz Khan, K.C.I.E., died in June 1909, and was succeeded by his son, Sardar Yakub Khan The attitude of the new chief towards Government, and his administration generally were unsatisfactory. In 1911, he was murdered by the sepoys of his guard. Some trouble was caused by an uncle of the murdered chief, who declared himself Chief, but the Government of India finally recognised the succession of a son, Mir Habibulla Khan, and approved measures for the administration of the State during his minority.

Las Bela is a small State occupying the valley and delta of the Purali river, about 50 miles west of the Sind boundary. Area 7,132 square miles; population 61,205, chiefly Sunni Mahomedans, estimated revenue about Rs. 3,26,256. The Chief of Las Bela, known as the Jam, is bound by agreement with the British Government to conduct the administration of his State in accordance with the advice of the Governor-General's Agent. This control is exercised through the Political Agent in Kalat. The Jam also employs an approved Wazir, to whose advice he is subject and who generally assists him in the transaction of State business.

Agent to the Governor-General for Baluchistan:—Lieut.-Col. Sir John Ramsay, K.C.I.E., C.S.I.

RAJPUTANA AGENCY.

Rajputana is the name of a great territorial circle with a total area of about 130,462 square miles, which includes 18 Native States, two chiefships, and the small British province of Ajmer-Merwara. It is bounded on the west by Sind, on the north-west by the Punjab State of Bahawalpur, on the north and north-east by the Punjab, on the east by the United Provinces and Gwalior, while the southern boundary runs across the central region of India in an irregular zig-zag line. Of the Native States 17 are Rajput, 2 (Bharatpur and Dholpur) are Jat, and one (Tonk) is Mahomedan. The chief administrative control of the British district is vested *ex-officio* in the political officer, who holds the post of Governor-General's Agent for the supervision of the relations between the several Native States of Rajputana and the Government of India. For administrative purposes they are divided into the following groups:—Alwar Agency; Bikanir Agency, Eastern Rajputana Agency, 3 States (Bharatpur, Dholpur Karauli); Haraoti and Tonk Agency, 3 States (principal States Bundi and Tonk); Jaipur Residency, 3 States (principal State, Jaipur); Kotah and Jhalawar Agency, 2 States; Mewar Residency; Southern Rajputana States Agency, 4 States (principal State, Banswara); Western Rajputana States Agency; 3 States (principal States, Marwar and Sirohi).

The Aravalli Hills intersect the country almost from end to end. The tract to the north-west of the hills is, as a whole, sandy, ill-watered and unproductive, but improves gradually from being a mere desert in the far west to comparatively fertile lands to the north-east. To the south-east on the Aravali Hills lie higher and more fertile regions which contain extensive hill ranges and which are traversed by considerable rivers.

COMMUNICATIONS.—The total length of railways in Rajputana is 1,576 miles, of which 739 are the property of the British Government. The Rajputana-Malwa (Government) runs from Ahmedabad to Bandikui and from there branches to Agra and Delhi. Of the Native State railways the most important is the Jodhpur-Bikaner line from Marwar Junction to Hyderabad (Sind) and to Bikaner.

INHABITANTS.—Over 50 per cent. of the population are engaged in some form of agriculture; about 20 per cent. of the total population are maintained by the preparation and supply of material substances; personal and domestic service provides employment for about 5 per cent. and commerce for 2½ per cent. of the population. The principal language is Rajasthani. Among castes and tribes, the most numerous are the Brahmans, Jats, Mahajans, Chamars, Rajputs, Minas, Gujars, Bhils, Malis, and Balais. The Rajputs are, of course, the aristocracy of the country, and as such hold the land to a very large extent, either as receivers of rent or as cultivators. By reason of their position as integral families of pure descent, as a landed nobility, and as the kinsmen of ruling chiefs, they are also the aristocracy of India; and their social prestige may be measured by observing that there is hardly a tribe or clan (as distinguished from a caste) in India which does not claim descent from, or irregular connection with, one of these Rajput stocks.

The population and area of the States are as follows:—

Name of State.	Area in square miles.	Population in 1911.
Mewar Residency—		
Udaipur	12,953	1,293,776
Banswara	1,946	165,463
Dungarpur	1,447	159,192
Partaogarh	886	62,704
Western States Residency—		
Jodhpur	34,963	2,057,553
Jaisalmer	16,062	88,311
Sirohi	1,964	189,127
Jaipur Residency—		
Jaipur	15,579	2,636,674
Kishangarh	858	87,191
Lawa	19	2,564
Haraoti-Tonk Agency—		
Bundi	2,220	218,730
Tonk	1,114	303,181
Shahpura	405	47,397
Eastern States Agency—		
Bharatpur	1,982	626,665
Dholpur	1,155	270,973
Karauli	1,242	156,786
Kotah-Jhalawar Agency—		
Kotah	5,684	639,089
Jhalawar	810	96,271
Bikaner	23,311	700,983
Alwar	3,141	791,688

Udaipur State (also called Meywar) was founded in about 646 A.D. The capital city is Udaipur, which is beautifully situated on the slope of a low ridge, the summit of which is crowned by the Maharajah's palaces, and to the north and west, houses extend to the banks of a beautiful piece of water known as the Pichola Lake in the middle of which stand two island palaces. It is situated near the terminus of the Udaipur-Chitor Railway, 697 miles north of Bombay. The present ruler is His Highness Maharajadhiraj Maharana Sir Fateh Singh Bahadur, G.C.S.I., G.C.I.E., who was born in 1849 and succeeded in 1884. He is the head of the seesodia Rajputs and is the Premier Chief. The administration is carried on by the Maharana, assisted by two ministerial officers who form the

chief executive department in the State. The revenue and expenditure of the State are now about 35 and 32 lakhs a year respectively. Udaipur is rich in minerals which are little worked. Its archæological remains are numerous, and stone inscriptions dating from the third century have been found.

Banswara State, the southernmost in Rajputana, became a separate State about 1527. Towards the end of the eighteenth century Banswara became more or less subject to the Marathas, and paid tribute to the Raja of Dhar. In 1812 the Maharawal offered to become tributary to the British Government on condition of the expulsion of the Marathas, but no definite relations were formed with him till the end of 1818. The present ruler is His Highness Maharawal Sri Prithi Singh Bahadur, who was born in 1888 and succeeded his father in 1913. The normal revenue is about 4 lakhs and the expenditure about 3 lakhs. The area of the State is 1,946 square miles, and the population 187,468.

Dongarpur State, with Banswara, formerly comprised the country called the Pagar. It was invaded by the Mahrattas in 1818. As in other States, inhabited by hill tribes, it became necessary at an early period of British supremacy to employ a military force to coerce the Bhills. The State represents the *Gadhi* of the eldest branch of the Sisodiyas and dates its separate existence from about the close of the 12th Century, when Mahup, the rightful heir to the Chittor Throne, migrated to these parts. The present Chief is His Highness Rai Rayan Maharawal Shri Sir Bijeysinghji Saheb Bahadur, K. C. I. E., born in 1887 and succeeded in 1898. During his minority the State was administered by a Political Officer, a chief Executive Officer and a Consultative Council of two. No railway line crosses the territory, the nearest railway station, Udaipur, being 60 miles distant. Revenue about 3 lakhs.

Partabgarh State, also called the Kanthal, was founded in the sixteenth century by a descendant of Rana Mokal of Mewar. The town of Partabgarh was founded in 1698 by Partab Singh. In the time of Jaswant Singh (1775-1844), the country was overrun by the Marathas, and the Maharawat only saved his State by agreeing to pay Holkar a tribute of *Salim Shahi* Rs. 72,700, (which then being coined in the State Mint was legal tender throughout the surrounding Native States) in lieu of Rs. 15,000 formerly paid to Delhi. The first connexion of the State with the British Government was formed in 1804; but the treaty then entered into was subsequently cancelled by Lord Cornwallis, and a fresh treaty, by which the State was taken under protection, was made in 1818. The tribute to Holkar is paid through the British Government, and in 1904 was converted to Rs. 36,350 British currency. The present ruler is His Highness Maharawat Sir Raghunath Singh Bahadur, K.C.I.E., who was born in 1859 and succeeded in 1890. The State is governed by the Mahrawat with the help of a Minister, and, in judicial matters, of a Committee of eleven members styled the Raj Sabha or State Council. Revenue about 4 lakhs; expenditure nearly 3¾ lakhs. The financial administration is now under the direct supervision of the State.

Jodhpur State, the largest in Rajputana; also called Marwar, consists largely of desolate, sandy country. The Maharaja of Jodhpur is the head of the Rathor Clan of Rajputs and claims descent from Rama the deified king of Ajodhya. The earliest known king of the clan lived in the sixth century from which time onwards their history is fairly clear. The foundation of Jodhpur dates from about 1212, and the foundations of Jodhpur City were laid in 1459 by Rao Jodha. The State came under British protection in 1818. In 1839 the British Government had to interfere owing to misrule, and the same thing occurred again in 1868. Jaswant Singh succeeded in 1873 and reformed the State. His son Sardar Singh was invested with powers in 1898, the minority rule having been carried on by his uncle Maharaja Sir Pratab Singh. He died in 1911 and was succeeded by his eldest son Maharaja Sumer Singh Bahadur, who was then 14 years of age. The administration of the State was carried on by a Council of Regency appointed by the Government, presided over by Major-General Maharaja Sir Pratab Singh, who abdicated the Gadi of Idar to carry on as Regent the reforms in Jodhpur which he had begun in the time of his nephew Maharaja Sir Sardar Singh Bahadur. On the outbreak of the European War both the Maharaja and the Regent offered their services and were allowed to proceed to the Front. The young Maharaja was, for his services at the Front, honoured with an Honorary Lieutenantship in the British Army, and was invested with full ruling powers in 1916, when the Regency terminated. Revenue 80 lakhs; expenditure 50 lakhs.

Jaisalmer State is one of the largest States in Rajputana and covers an area of 16,062 square miles. The Rulers of Jaisalmer belong to the Jadon clan and claim descent from Krishna. Jaisalmer City was founded in 1156, and the State entered into an alliance of perpetual friendship with the British Government in 1818. In 1844, after the British conquest of Sind the forts of Shahgarh, Garsia, and Ghotaru, which had formerly belonged to Jaisalmer, were restored to the State. The present Ruling Prince is His Highness Maharajadhiraja Maharawal Shri Jawaharsinghji Bahadur. Revenue about four lakhs.

Sirohi State is much broken up by hills of which the main feature is Mount Abu, 5,650 feet. The Chiefs of Sirohi are Deora Rajputs, a branch of the famous Chauhan clan which furnished the last Hindu kings of Delhi. The present capital of Sirohi was built in 1425. The city suffered in the eighteenth century from the wars with Jodhpur and the depredations of wild Mina tribes. Jodhpur claimed suzerainty over Sirohi but this was disallowed and British protection was granted in 1823. The present ruler is His Highness Maharajah Dhiraj Maharao Sir Kesri Singh Bahadur, G.C.I.E., K.C.I.E. The State is ruled by the Maharao with the assistance of a Musahib Ala who is the heir apparent and other officials. Revenue about 8 lakhs; expenditure 7 lakhs.

Jaipur State is the fourth largest in Rajputana. It consists, for the most part, of level and open country. The Maharaja of Jaipur is the head of the Kachwaha clan of Rajputs, which claims descent from Kusa, the son of Rama, king of Ajodhya, and the hero of the famous epic poem the Ramayana. The dynasty in Eastern Rajputana dates from about the middle of the twelfth century, when Amber was made the capital of a small State. The Chiefs of that State acquired fame as generals under the Mughals in later centuries, one of the best known being Sawai Jai Singh in the eighteenth century who was remarkable for his scientific knowledge and skill. It was he who moved the capital from Amber and built the present city of Jaipur and elevated the State above the principalities around. On his death a part of the State was annexed by the Jats of Bharatpur and internal disputes brought Jaipur to great confusion. British protection was extended to Jaipur in 1818, but the State continued to be disturbed and a Council of Regency was appointed, which governed up to 1851, when Maharaja Ram Singh assumed full powers. He nominated as his successor Kalm Singh who succeeded in 1880, under the name of Sawai Madho Singh II, and is the present ruler. He was born in 1861, and, in consideration of his youth, the administration was at first conducted by a Council under the joint presidency of the Maharaja and the Political Agent. He was invested with full powers in 1882. In 1887, his salute was raised from 17 to 19 guns as a personal distinction, followed in 1896 by two additional guns. In 1888 he was created a G.C.S.I. In 1901 a G.C.I.E., and in 1903 a G.C.V.O. In 1904 he was made honorary colonel of the 13th Rajputs, and in 1911 a Major General. In 1908 he was presented with the Honorary degree of LL.D. of Edinburgh University and in 1912, made a Donat of the Order of the Hospital of St. John of Jurusalem. Among important events of His Highness's rule may be mentioned the raising of the Imperial Service Transport Corps in 1889-90; the construction of numerous irrigation works, hospitals and dispensaries; and the gift of 25 lakhs as an endowment to the Indian People's Famine Relief Trust. His Highness has contributed about 8 lakhs to various War funds, and 10 machine guns as a thank-offering for the recovery of H. M. the King from his accident in France. Jaipur City is the largest town in Rajputana and is one of the few eastern cities laid out on a regular plan. It contains, in addition to the Maharaja's Palace, many fine buildings. The administration of the State is carried on by the Maharaja assisted by a Council of ten members. The military force consists of an Imperial Service Transport Corps which has twice served in Frontier campaigns and in the present war, and about 5,000 infantry, 700 cavalry and 360 artillerymen. The normal revenue is about 65 lakhs; expenditure about 59 lakhs.

Kishangarh State is in the centre of Rajputana and consists practically of two narrow strips of land separated from each other; the northern mostly sandy, the southern generally flat and fertile. The Chiefs of Kishangarh belong to the Rathor clan of Rajputs and are descended from Raja Udal Singh of Jodhpur, whose second son founded the town of Kishangarh in 1611. The State was brought under British protection in 1818. After various disputes necessitating British mediation, the State entered into good hands and was well ruled during the latter part of the nineteenth century. The present ruler is Major His Highness Maharajadhiraj Sir Madan Singh Bahadur, K.C.S.I., K.C.I.E., Umdai Rajhai-Buland Makan, who was born in 1884 and was invested with powers in 1905. He administers the State with the help of a Council of two members. His Highness served in France in 1914-15 and was mentioned in despatches by Field-Marshal Lord French. Revenue 5·7 lakhs; Expenditure 4·6 lakhs.

Lawa State, or takurat, of Rajputana is a separate chiefship under the protection of the British Government and independent of any Native States. It formerly belonged to Jaipur and then became part of the State of Tonk. In 1867, the Nawab of Tonk murdered the Thakur's uncle and his followers, and Lawa was then raised to its present State. The Thakurs of Lawa belonged to the Naruka sept of the Kachwaha Rajputs. The present Thakur, Mangal Singh, was born in 1873, and succeeded to the estate in May, 1892. Revenue about Rs. 11,000.

Bundi State is a mountainous territory in the south-east of Rajputana. The Chief of Bundi is the head of the Hara sept of the great clan of Chauhan Rajputs and the country occupied by this sept has for the last five or six centuries been known as Haraoti. The State was founded in the early part of the fourteenth century and constant feuds with Mewar and Malwa followed. It threw in its lot with the Mahomedan emperors in the sixteenth century. In later times it was constantly ravaged by the Marathas and Pindaries and came under British protection in 1818 at which time it was paying tribute to Holkar. The present ruler of this State—which is administered by the Maharao Raja and a Council of 5 in an old-fashioned but popular manner—is His Highness Maharao Raja Sir Raghubir Singh Bahadur, G.C.I.E., G.C.V.O., K.C.S.I. He was born in 1869 and succeeded in 1889. Revenue about 10 lakhs: Expenditure 9·6 lakhs.

Tonk State—Partly in Rajputana and partly in Central India, consists of six districts separated from each other. The ruling family belongs to the Pathans of the Buner tribe. The founder or the dynasty was Amir Khan, a General in the army of Holkar at the end of the eighteenth century. He received a conditional guarantee of the lands he held from Holkar in 1817. His grandson was deposed in 1867 owing to misrule. The present ruler of the State is His Highness Nawab Sir Muhammad Ibrahim Ali Khan Bahadur, G.C.I.E. The administration is conducted by the Nawab and a Council of three members. Revenue 16 lakhs: Expenditure 15 lakhs.

Shahpura Chiefship is a small pastoral State. The ruling family belongs to the Seesodia clan of Rajputs. The Chiefship came into existence about 1629, being a grant from the Emperor Shah Jahan to one Sujan Singh. The present Chief is Sir Nahar Singh, K.C.I.E., who succeeded by adoption in 1870 and received

full powers in 1876. In addition to holding Shahpura by grant from the British Government the Raja Dhiraj possesses the estate of Kachhola in Udaipur for which he pays tribute and does formal service as a great noble of that State. Revenue 3 lakhs: Expenditure 2·6 lakhs.

Bharatpur State consists largely of an immense alluvial plain, watered by the Banganga and other rivers. It passed into the hands of Mahomed Ghori at the end of the twelfth century and for 500 years was held by whatever dynasty ruled in Delhi. The present ruling family are Jats, of the Sinsinwal clan, who trace their pedigree to the eleventh century. The Bharatpur ruling family is of the Sinsinwal clan named so after their old village Sinsini. Bharatpur was the first State in Rajputana, that made alliance with the British Government in 1803, helped Lord Lake with 5,000 horse in his conquest of Agra and battle of Laswari wherein the Maratha power was entirely broken and received five districts as reward for the service. In 1804, however, Bharatpur sided with Jaswant Rao Holkar against the Government which resulted in a fight with the Government. Peace was re-established in 1805 under a treaty of alliance and it continues in force. The State, being usurped by Durjan Sal in 1825, the British Government took the cause of the rightful heir Maharaja Balwant Singh Sahab. Bharatpur was besieged by Lord Combermere and, as the faithful subjects almost all joined the British Army, the result could not be otherwise than capture of the Capital and restoration of the State to its rightful owner. Bharatpur rendered valuable service to the British Government during the Mutiny. The present chief is a minor, Maharaja Sawai Kishen Singh Bahadur, who was born in 1899 and succeeded in the following year, his father, Ram Singh, who was deposed. The administration is carried on by a Council of four members presided over by a Political Agent. Revenue 38 lakhs: Expenditure 37 lakhs.

Dholpur State, the easternmost State in Rajputana, has changed hands an unusual number of times. It was occupied by the British in 1803 and restored to the Gwalior Chief who formerly owned it, but by a fresh arrangement of 1805 it was constituted a State with other districts and made over to Maharaj Rana Kirat Singh, in exchange for his territory of Gohad which was given up to Sindhia. The ruling family are Jats of the Bamraotia clan, the latter name being derived from a place near Agra where the family held land in the twelfth century. The present chief—who is assisted in the administration by three Ministers—is H. H. Maharaj Rana Udaibhan Singh Lokinder Bahadur. He was born in 1893 and succeeded in 1911. Revenue 15 lakhs: Expenditure 12 lakhs.

Karauli State is a hilly tract in Eastern Rajputana, of which the ruler is the head of the Jadon clan of Rajputs who claim direct descent from Krishna and were at one time very powerful. On the decline of the Mughal power the State was subjugated by the Marathas, but by the treaty of 1817 it was taken under British protection. Its subsequent history is of interest chiefly for a famous adoption case, in 1852. The present ruler is H. H. Maharaja Sir Banwar Pal Deo Bahadur, G.C.I.E., who was born in 1864, installed in 1889, and invested with powers in 1889. He is assisted by a council of two members. Revenue 6 lakhs; Expenditure 5 lakhs.

Kotah State belongs to the Hara sect of the clan of Chauhan Rajputs, and the early history of their house is, up to the 17th century, identical with that of the Bundi family from which they are an offshoot. Its existence as a separate State dates from 1625. It came under British protection in 1817, but a dispute as to the succession made armed intervention necessary in 1921 when the Maharao was defeated at the battle of Mangrol. This dispute (due to the fact that an arrangement had been made by which one person—Zalim Singh—was recognized as the titular chief and another—Umeed Singh—as the guaranteed actual ruler) broke out again in the thirties when it was decided with the consent of the Chief of Kotah to dismember the State and create a new principality of Jhalawar as a separate provision for the descendants of Zalim Singh. The present ruler is H. H. Lieut.-Colonel Maharao Sir Umed Singh Bahadur, G.C.S.I., G.C.I.E., who was born in 1873 and invested with full powers in 1896. In administration he is assisted by a Diwan (Dewan Bahadur Chaube Raghunath Das, C.S.I.) The most important event of his rule has been the restoration, on the deposition of the late chief of the Jhalawar State, of 15 out of the 17 districts which had been ceded in 1838 to form that principality. Revenue 40 lakhs: Expenditure 34 lakhs.

Jhalwar State (for history see under Kotah) consists of two separate tracts in the south-east of Rajputana. The ruling family belongs to the Jhala clan of Rajputs. The last ruler was deposed for misgovernment in 1896, part of the State was reassigned to Kotah, and Kunwar Bhawani Singh, son of Thakur Chhatarsalji of Fatehpur, was selected by Government to be the Chief of the new State. He was born in 1874 and was created a K.C.S.I. in 1908. He is assisted in administration by a Council, has established many useful institutions, and has done much to extend education in the State. Revenue 6 lakhs.

Bikaner State, the second largest in Rajputana, consists largely of sandy and ill-watered land. It was founded by Bika, a Rathor Rajput, the sixth son of a Chief of Marwar, in the 15th century. Rai Singh, the first Raja, was one of Akbar's most distinguished generals, and built the main fort of Bikaner. Throughout the 18th century there was constant fighting between Bikaner and Jodhpur. In 1818 the Maharaja invited the assistance of British troops to quell a rebellion, and subsequently a special force had to be raised to deal with the dacoits on the southern borders of the State. The Thakurs of the State continued to give trouble up to the eighties. The present chief is Colonel H. H. Maharajah Sir Ganga Singh Bahadur, G.C.S.I., G.C.I.E., A.D.C. to the King, who was born in 1880 and invested with full powers in 1898. He raised an Imperial Service Camel Corps which served in China and Somaliland, and His Highness served in the former campaign himself, being mentioned in des-

patches. In 1900 he was awarded the first class Kaisar-i-Hind medal for the active part he took in relieving the great famine of 1899-1900. He is an honorary LL.D. of Cambridge. In administration His Highness is assisted by five secretaries, to each of whom are allotted certain departments; and there is a council of five members which is primarily a judicial body, but is consulted in matters of importance. The normal revenue is Rs. 26 lakhs and the expenditure 21 lakhs: there are no debts. A coal mine is worked at Palana, 14 miles south of the capital.

Alwar State is a hilly tract of land in the East of Rajputana. Its chiefs belong to the Lalawat branch of the Naruka Rajputs, an offshoot from the Kachwaha Rajputs, of whom the Maharaja of Jaipur is the head. The State was founded by Pratab Singh, who before his death in 1791 had secured possession of large portions of the Jaipur State. His successor sent a force to co-operate with Lord Lake in the war of 1803 and an alliance was concluded with him in that year, when the boundaries of the State as now recognised were fixed. Various rebellions and disputes about succession mark the history of the State during the earlier part of the nineteenth century. The present chief, H. H. Lt.-Col. Sewai Maharaja Sir Jey Singhji Bahadur, K.C.S.I., K.C.I.E., who was born in 1882, succeeded his father in 1892 and was invested with powers in 1903. He carries on the administration with the assistance of a Council of four Ministers, Members of His Highness, Council and various heads of departments. The normal revenue and expenditure are about Rs. 32 lakhs a year. The State maintains an imperial service regiment of cavalry, another of infantry, and an irregular force. The late Maharaja was the first chief in Rajputana to offer (in 1888) aid in the defence of the Empire. The capital is Alwar on the Rajputana-Malwa Railway, 98 miles south-west of Delhi.

RAJPUTANA.

Agent to Governor-General—Sir E. G. Colvin.

MEWAR.

Resident—C. L. S. Russell.

JAIPUR.

Resident—Lieut.-Col. R. A. E. Benn.

EASTERN RAJPUTANA STATES.

Political Agent—Major G. H. Anderson.

WESTERN RAJPUTANA STATES.

Resident—Lieut.-Col. C. J. Windham.

HARAOTI AND TONK.

Political Agent—S. S. Waterfield.

KOTAH AND JHALAWAR.

Political Agent—Lieut.-Col. A. B. Drummond.

CENTRAL INDIA AGENCY.

Central India is the name given to the country occupied by the Native States grouped together under the supervision of the Political Officer in charge of the Central India Agency. These States lie between 21° 24′ and 26° 32′ N. lat. and between 74° 0′ and 83° 0′ E. long. The British districts of Jhansi and Lalitpur divide the agency into two main divisions—Bundelkhand and Baghelkhand lying to the east, and Central India proper to the west. The total area covered is 78,772 square miles, and the population (1911) amounts to 93,980. The great majority of the people are Hindus. The principal States are eight in number—Gwalior, Indore, Bhopal, Rewa, Dhar, Jaora, Datia and Orchal of which two, Bhopal and Jaora, are Mahomedan and the rest are Hindu. Besides these there are a multitude of petty States held by their rulers under the immediate guarantee of the British Government, but having feudal relations with one or other of the larger States. The total number of States amounts to 153. For administrative purposes they are divided into the following groups: Baghelkhand Agency, 12 States (principal State Rewa): Bhopal Agency, 19 States (principal Bhopal) State Bhopawar Agency, 21 States (principal State Dhar); Bundelkhand Agency, 22 States (principal States, Datia and Orcha); Gwalior Agency, 32 States (principal State, Gwalior); Indore Residency, 9 States (principal State, Indore); Malwa Agency, 38 States (principal State, Jaora). The Agency may be divided into three natural divisions, the plateau, lowlying, and hilly. The plateau tract includes the Malwa plateau, the Highland tract stretching from the great wall of the Vindhyas to Marwar, the land of open rolling plains. The lowlying tract embraces Northern Gwalior and stretches across into Bundelkhand and Baghelkhand up to the Kaimur Range. The hilly tract lies along the ranges of the Vindhyas and the Satpuras. There agriculture is little practised, the inhabitants being mostly members of the wild tribes. The territories of the different States are much intermingled, and their political relations with the Government of India and each other are very varied. Eleven Chiefs have direct treaty engagements with the British Government.

The following list gives the approximate size, population and revenue of the eight principal States above mentioned:—

Name.	Area in square miles.	Population.	Revenue.
			Rs. lakhs.
Gwalior ..	25,133	3,102,279	140
Indore ..	9,506	1,007,856	70
Bhopal ..	6,902	730,383	30
Rewah ..	13,000	1,514,843	53
Dhar ..	1,783	154,070	9
Jaora ..	568	75,951	8
Datia ..	911	154,603	9
Orcha ..	2,079	330,032	11

Gwalior.—The house of Scindia traces its descent to a family of which one branch held the hereditary post of patel in a village near Satara. The head of the family received a patent of rank from Aurangzebe. The founder of the Gwalior House was Ranoji Scindia who is said to have been a personal attendant on the Peshwa Baji Rao. In 1726 together with Malhar Rao Holkar, the founder of the house of Indore, he was authorised by the Peshwa to collect revenues and he fixed his headquarters at the ancient city of Ujjain, which became the capital of the Scindia dominions. Gwalior subsequently played a leading part in shaping the history of India. The reverses which Scindia's troops met with at the hands of the British in 1778 and 1780 led to the treaty of Salbai (1782), which made the British arbiters in India and recognised Scindia as an independent Chief and not as a vassal under the Peshwa. Subsequently Scindia's military power, developed by the French Commander DeBoigne, was completely destroyed by the British victories of Ahmednagar, Assaye, Asirgarh and Laswari.

The present ruler is Major-General H. H. Maharaja Sir Madho Rao Alijah Bahadur Scindia, G.C.V.O., G.C.S.I., A.D.C. to the King. He succeeded in 1886 and obtained powers in 1894. In 1901 he went to China during the war; he holds the rank of honorary Major-General of the British Army and the honorary degrees of LL.D., Cambridge, and D.C.L., Oxon. He is also a Donat of the Order of St. John of Jerusalem in England. The administration is controlled by the Maharaja assisted by five members of the Majlis-i-khas.

The northern part of the State is traversed by the G. I. P. Railway and two branches run from Bhopal to Ujjain and from Bina to Baran. The Gwalior Light Railway runs for 250 miles from Gwalior to Bhind, from Gwalior to Sheopur and from Gwalior to Sipri. The main industries are cotton ginning, which is done all over the State; fine muslins made at Chanderi, leather work, etc. The State maintains three regiments of Imperial Service Cavalry, two battalions of Imperial Service Infantry and a transport corps. Lashkar, the capital city, is two miles to the south of the ancient city and the fort of Gwalior. Annual expenditure 144 lakhs.

Indore.—The Holkars of Indore belong to the shepherd class, the founder of the house, Malhar Rao Holkar, being born in 1693. His soldierly qualities brought him to the front under the Peshwa, who took him into his service and employed him in his conquests. When the Maratha power was broken at the battle of Panipat, in 1761, Malhar Rao had acquired vast territories stretching from the Deccan to the Ganges. He was succeeded by a lunatic grandson who again was succeeded by his mother, Ahilya Bai, whose administration is still looked upon as that of a model ruler. Disputes as to the succession and other causes weakened this powerful State, and, when it assumed a hostile attitude on the outbreak of war in 1817 between the British and the Peshwa, Holkar was compelled to come to terms. The Treaty of Mandaser in 1818 still governs the regulations existing between the State and the British Government. In the mutiny of 1857, when Holkar was unable to control his troops he personally gave every possible assistance to the authorities at Mhow.

In 1903 Sivaji Rao, who died in 1908, abdicated in favour of his son, His Highness Maharaja Tukoji Rao Holkar, the present ruler, who was born in 1890, and was formally invested with ruling powers in November 1911. In the administration His Highness is assisted by his Chief Minister and a Council of 5 Ministers. The State Army consists of 519 Imperial Service Troops and 1,629 State forces. The capital is Indore City on the Ajmer-Khandwa Section of the Rajputana-Malwa Railway. The ordinary revenue is estimated at Rs. 85 lakhs.

Bhopal.—The principal Mussalman State in Central India, ranks next in importance to Hyderabad among the Muhammadan States of India. The ruling family was founded by Dost Mohammed Khan, a Tirah Afghan in the service of Aurangzeb. He was nominated Superintendent of the District of Bairasia and succeeded in establishing his independent authority in Bhopal and its neighbourhood. In the early part of the 19th century, the Nawabs successfully withstood the inroads of Scindia and Bhonsla and by the agreement of 1817 Bhopal undertook to assist the British with a contingent force and to co-operate against the Pindari bands.

The present Ruler of the State, Her Highness Nawab Sultan Jahan Begum, C. I., G.C.S.I., G.C.I.E., is the third in the successive line of lady-rulers, who have ruled the destinies of the State with marked ability. Having succeeded in 1901, she personally conducts, and has introduced a number of reforms in the administration of her State. Her eldest son, Hon. Major Nawab Mahomad Nasrullah Khan, controls the Forest Department and her second son Hon. Major Nawabzada Mahomad Obaidullah Khan, C.S.I., who holds the rank of Brig.-Genl. in the State Army, is the Commander-in-Chief of the State Forces, while the youngest Nawabzada, Mahomad Hamidullah Khan, B.A., and Hon. Major in the Bhopal Army, is the head of her Highness' Secretariat and President of the Council advising the Darbar on Municipal affairs. The State maintains one regiment each of Imperial Service Cavalry and Infantry. The capital, Bhopal City, on the northern bank of an extensive lake is situated at the junction of the G. I. P. Ry. with the Bhopal Ujjain Railway.

Rewah.—This State lies in the Baghelkhand Agency, and falls into two natural divisions separated by the scarp of the Kaimur range. Its Chiefs are Baghel Rajputs descended from the Solanki clan which ruled over Gujrat from the tenth to the thirteenth century. In 1812, a body of Pindaries raided Mirzapur from Rewah territory and the chief, who had previously rejected overtures for an alliance, was called upon to accede to a treaty acknowledging the protection of the British Government. During the Mutiny, Rewah offered troops to the British, and for his services then, various parganas, which had been seized by the Marathas, were restored to the Rewah Chief. The present chief is H. H. Maharaja Sir Venkat Raman Singh, G.C.S.I., who was born in 1876. He is assisted in the administration by two Commissioners, one for revenue

matters and one for judicial. The State force consist of about 1,700 men. The State is famous for its archæological remains and is rich in minerals, coal being mined at Umaria. The average expenditure is Rs. 11 lakhs.

Dhar.—This State, under the Bhopawar Agency, takes its name from the old city of Dhar, long famous as the capital of the Paramara Rajputs, who ruled over Malwa from ninth to the thirteenth century and from whom the present chiefs of Dhar—Ponwar Marathas—claim descent. In the middle of the 18th century the Chief of Dhar, Anand Rao, was one of the leading chiefs of Central India, sharing with Holkar and Sindhia the rule of Malwa. But in 1819, when a treaty was made with the British, the State had become so reduced that it consisted of little more than the capital. The ruler is H. H. Raja Sir Udaji Rao Ponwar, K.C.S.I., who was born in 1886, and has control of all civil, judicial, and ordinary administrative matters. There are 22 feudatories, of whom 13 hold under a guarantee from the British Government. The average expenditure is about 8 lakhs.

Jaora State.—This State is in the Malwa Agency covering an area of about 600 square miles with a total population of 82,497, and has its head quarters at Jaora town. The first Nawab was an Afghan from Swat, who had come to India to make his fortune, found employment under the freebooter Amir Khan, and obtained the State after the treaty of Mandasore in 1818. The present chief is Major H. H. Sir Iftikhar Ali Khan Bahadur, K.C.I.E, who was born in 1883 and is an Honorary Major in the Indian Army. The soil of the State is among the richest in Malwa, being mainly of the best black cotton variety, bearing excellent crops of poppy. The average annual revenue is Rs. 9,78,909.

Ratlam—Is the premier Rajput State in the Malwa Agency. It covers an area of 871 square miles, including that of the Jagir of Khera in the Kushalgarh Chiefship, which pays an annual tribute to the Ratlam Darbar. The State was founded by Ratansingh, a great grandson of Raja Udai Singh of Jodhpur, in 1652. The Raja of Ratlam is the religious head of the Rajputs of Malwa, and important caste questions concerning even Thakurs tributary to other chiefs are referred to him for decision. The present Chief of Ratlam is Col. His Highness Raja Sir Sajjan Singh, K.C.S.I., who was born in 1880, and invested with full powers in 1898. In administration His Highness is assisted by a Council of four members. Since April 1915, His Highness has been serving at the front in France.

Senior Member of Council,—Rai Bahadur Brijmohannath A. Zutshi, B.A., LL.B.

Datia State.—The chiefs of this State, in the Bundelkhand Agency, are Bundela Rajputs of the Orchha house. The territory was granted by the chief of Orchha to his son Bhagwan Rao in 1626, and this was extended by conquest and by grants from the Delhi emperors. The present chief is H. H. Maharaja Lokendra Govind Singh Bahadur who was born in 1886 and succeeded in 1907. The heir-apparent, Raja Bahadur Balbhadra Singh (*b* 1907) is being educated at the Daly College.

Orchha State.—The chiefs of this State are Bundela Rajputs claiming to be descendants of the Gaharwars of Benares. It was founded as an independent State in 1048 A. D. It entered into relations with the British by the treaty made in 1812. The present ruler is His Highness Sir Pratap Singh, G.C.S.I., G.C.I.E., who was born in 1854. He has the title of Saramad-i-Rajaha-i-Bundelkhand Maharaja Mahendra Sawai Bahadur. The State has a population of 330,032 and an area of 2,080 square miles. The capital is Tikamgarh, 36 miles from Lalitpur on the G. I. P. Railway. Orchha, the old capital, has fallen into decay but is a place of interest on account of its magnificent buildings of which the finest were erected by Bir Singh Deo, the most famous ruler of the State (1605-1627).

Agent to Governor-General—O. V. Bosanquet.

INDORE.

Resident—Vacant.

BHOPAL.

Political Agent—Lt. Col. F. W. P. Macdonald

BUNDELKHAND.

Political Agent—Lieut.-Col. P T. A. Spence.

BAGHELKHAND.

Political Agent—Lieut.-Col. F. G. Beville, C.I.E.

BHOPAWAR.

Political Agent—L. M. Crump.

Sikkim.

Sikkim is bounded on the north and north-east by Tibet, on the south-east by Bhutan, on the south by the British district of Darjeeling, and on the west by Nepal. The population consists of Bhutias, Lepchas, and Nepalese. It forms the direct route to the Chumbi Valley in Tibet. The main axis of the Himalayas, which runs east and west, forms the boundary between Sikkim and Tibet. The Singalila and Chola ranges, which run southwards from the main chain, separate Sikkim from Nepal on the west, and from Tibet and Bhutan on the east. From the eastern flank of the Singalila range rise the great snow peaks of Kinchinjunga (28,146 feet), one of the highest mountains in the world; it throws out a second spur terminating at Tendong. The Chola range which is much loftier than that of Singalila, leaves the main chain at the Dongkya mountain.

Tradition says that the ancestors of the rajas of Sikkim originally came from eastern Tibet. The State was twice invaded by the Gurkhas at the end of the eighteenth century. On the outbreak of the Nepal War in 1814, the British formed an alliance with the Raja of Sikkim and at the close of the war the Raja was rewarded by a considerable accession of territory. In 1835 the Raja granted the site of Darjeeling to the British and received Rs. 3,000 annually in lieu of it.

This grant was stopped and a part of the State was annexed for the seizure and detention of Dr. Campbell, the Superintendent of Darjeeling, and Dr. Hooker, the famous naturalist, in 1849. The State was previously under the Government of Bengal, but was brought under the direct supervision of the Government of India in 1906. The State is thinly populated, the area being 2,818 square miles, and the population 87,920, chiefly Buddhists and Hindus. The most important crop is maize. There are several trade routes through Sikkim from Darjeeling District into Tibet. In the convention of 1890 provision was made for the opening of a trade route but the results were disappointing, and the failure of the Tibetans to fulfil their obligations resulted in 1904 in the despatch of a mission to Lhasa, where a new convention was signed. Trade with the British has increased in recent years, and is now between 40 and 50 lakhs yearly. A number of good roads have been constructed in recent years. The present ruler, His Highness Maharajah Tashi Namgyal, was born in 1893 and succeeded in 1914. The Political Officer stationed at Gangtok advises and assists the Maharajah and his Council. The average revenue is Rs. 2,62,000.

Political Officer in Sikkim:—C. A. Bell, C.M.G.

Bhutan.

Bhutan extends for a distance of approximately 190 miles east and west along the southern slopes of the central axis of the Himalayas, adjacent to the northern border of Eastern Bengal and Assam. Its area is 18,000 square miles and its population, consisting of Buddhists and Hindus, has been estimated at 300,000 The country formerly belonged to a tribe called Tek-pa, but was wrested from them by some Tibetan soldiers about the middle of the seventeenth century. British relations with Bhutan commenced in 1772 when the Bhotias invaded the principality of Cooch Behar and British aid was invoked by that State. After a number of raids by the Bhutanese into Assam, an envoy (the Hon. A. Eden) was sent to Bhutan, who was grossly insulted and compelled to sign a treaty surrendering the Duars to Bhutan. On his return the treaty was disallowed and the Duars annexed. This was followed by the treaty of 1865, by which the State's relations with the Government of India were satisfactorily regulated. The State formerly received an allowance of half a lakh a year from the British Government in consideration of the cession in 1865 of some areas on the southern borders. This allowance was doubled by a new treaty concluded in January 1910, by which the Bhutanese Government bound itself to be guided by the advice of the British Government in regard to its external relations, while the British Government undertook to exercise no interference in the internal administration of Bhutan. On the occasion of the Tibet Mission of 1904, the Bhotias gave strong proof of their friendly attitude. Not only did they consent to the survey of a road through their country to Chumbi, but their ruler, the Tongsa Penlop, accompanied the British troops to Lhasa, and assisted in the negotiations with the Tibetan authorities. For these services he was made a K.C.I.E., and he has since entertained t British Agent hospitably at his capital. The ruler is now known as H. H. the Maharaja of Bhutan, Sir Uggen Wangchuk, K.C.S.I., K.C.I.E. At the head of the Bhutan Government, there are nominally two supreme authorities; the Dharma Raja, known as Shapting Renipoche, the spiritual head; and the Deb or Depa Raja, the temporal ruler. The Dharma Raja is regarded as a very high incarnation of Buddha, far higher than the ordinary incarnations in Tibet, of which there are several hundreds. On the death of a Dharma Raja a year or two is allowed to elapse, and his reincarnation then takes place, always in the Choje, or royal family of Bhutan.

Cultivation is backward and the chief crop is maize. The Military force consists of local levies under the control of the different chiefs. They are of no military value.

Nepal.

The kingdom of Nepal is a narrow tract of country extending for about 520 miles along the southern slope of the central axis of the Himalayas. It has an area of about 54,000 square miles, with a population of about 5,000,000, chiefly Hindus. The greater part of the country is mountainous, the lower slopes being cultivated. Above these is a rugged broken wall of rock leading up to the chain of snow-clad peaks which culminate in Mount Everest (29,002 feet) and others of slightly less altitude. The country before the Gurkha occupation was split up into several small kingdoms under Newar kings. The Gurkhas under Prithvi Narayan Shah overran and conquered the different kingdoms of Patan, Kathmandu, and Bhatgaon, and other places during the latter half of the 18th century and since then have been rulers of the whole of Nepal. In 1846 the head of the Rana family obtained from the sovereign the perpetual right to the office of Prime Minister of Nepal, and the right is still enjoyed by his descendant. In 1850 Jung Bahadur paid a visit to England and was thus the first Hindu Chief to leave India and to become acquainted with the power and resources of the British nation. The relations of Nepal with the Government of India are regulated by the treaty of 1816 and subsequent agreements by which a representative of the British Government is received at Kathmandu. This British representative has come to be styled as Resident though his function differs much from that of a Resident at the courts of the Native States of India. By virtue of the same treaty Nepal maintains a Representative at Delhi and her treaty relations with Tibet allow her to keep a Resident at Lhassa of her own. Her relation with China is of a friendly nature. Ever since the conclusion of the treaty of 1816 the friendly relations with the British Government have steadily been maintained and during the rule of the present Prime Minister it has been at its height as is evidenced by the valuable friendly help in men and money which has been given and which was appreciatively mentioned in both the Houses in Parliament and by Mr. Asquith in his Guildhall Speech in 1915.

From the foregoing account of the history of Nepal it will be seen that the Government of

the country has generally been in the hands of the Minister of the day. Since the time of Jung Bahadur this system of government has been clearly laid down and defined. The sovereign, or Maharaj Dhiraj, as he is called, is but a dignified figure-head, whose position can best be likened to that of the Emperor of Japan during the Shogunate. The real ruler of the country is the Minister who, while enjoying complete monopoly of power, couples with his official rank the exalted title of Maharaja. Next to him comes the Commander-in-Chief, who ordinarily succeeds to the office of Minister.

The present Minister at the head of affairs of Nepal is Maharaja Sir Chandra Shum Shere Jung Bahadur Rana, G.C.B., G.C.S.I., G.C.V.O., D.C.L. and Honorary Lieut.-General in the British Army. He has been Prime Minister and Marshal of Nepal since June, 1901.

Rice, wheat and maize form the chief crops in the lowlands. Mineral wealth is supposed to be great, but, like other sources of revenue, has not been developed. Communications in the State are primitive. The revenue is about two crores of rupees per annum. The standing army is estimated at 45,000, the high posts in it being filled by relations of the Minister. The State is of considerable archæological interest and many of the sites connected with scenes of Buddha's life have been identified in it by the remains of inscribed pillars.

Resident: Lieut.-Col. S. F. Bayley.

NORTH-WEST FRONTIER STATES.

The native states of the North-West Frontier Provinces are Amb, Chitral, Dir, Nawagai (Bajaur), and Phulera. The total area is about 7,704 square miles and the population, mainly Mahomedan, is 1,622,094. The average annual revenue of the first four is about Rs. 4,65,000; that of Phulera is unknown.

Amb.—Is only a village on the western bank of the Indus in Independent Tanawala.

Chitral.—Runs from Dir to the south of the Hindu-Kush range in the north, and has an area of about 4,500 square miles. The ruling dynasty has maintained itself for more than three hundred years, during the greater part of which the State has constantly been at war with its neighbours. It was visited in 1885 by the Lockhart Mission, and in 1889, on the establishment of a political agency in Gilgit, the ruler of Chitral received an annual subsidy from the British Government. That subsidy was increased two years later on condition that the ruler, Amam-ul-Mulk, accepted the advice of the British Government in all matters connected with foreign policy and frontier defence. His sudden death in 1892 was followed by a dispute as to the succession. The eldest son Nizam-ul-Mulk was recognised by Government, but he was murdered in 1895. A religious war was declared against the infidels and the Agent at Gilgit, who had been sent to Chitral to report on the situation, was besieged with his escort and a force had to be despatched (April 1895) to their relief.

The three valleys of which the State consists are extremely fertile and continuously cultivated. The internal administration of the country is conducted by the Mehtar, and the foreign policy is regulated by the Political Agent.

Dir.—The territories of this State, about 5,000 square miles in area, include the country drained by the Panjkora and its affluents down to the junction of the former river with the Bajaur or Rud, and also the country east of this from a point a little above Tirah in Upper Swat down to the Dush Khel Country, following the right bank of the Swat river throughout. The Khan of Dir is the overlord of the country, exacting allegiance from the petty chiefs of the clans. Dir is mainly held by Yusufzai Pathans, the old non-Pathan inhabitants being now confined to the upper portion of the Panjkora Valley known as the Bashkar.

Bajaur.—Nawagai is a tract of country included in the territories collectively known as Bajaur which is bounded on the north by the Panjkora river, on the east by the Utman Khel and Mohmand territories and on the west by the watershed of the Kuna river which divides it from Afghanistan. The political system, if it can be termed system, is a communal form of party government, subject to the control of the Khan of Nawagai, who is nominally the hereditary chief of all Bajaur. Under him the country is divided into several minor Khanates, each governed by a chieftain, usually a near relative of the Khan. But virtually the authority of the chieftains is limited to the rights to levy tithe, or *ushar*, when they can enforce its payment, and to exact military service if the tribesmen choose to render it.

Political Agent for Dir, Swat and Chitral, Major W. J. Keen.

NATIVE STATES UNDER LOCAL GOVERNMENTS.

The Madras Presidency includes 5 Native States covering an area of 10,087 square miles. Of these the States of Travancore and Cochin represent ancient Hindu dynasties. Pudukottai is the inheritance of the chieftain called the Tondiman. Banganapalle and Sandur, two petty States, of which the first is ruled by a Nawab, lie in the centre of two British districts.

Name.	Area sq. miles.	Population.	Approx. Revenue in lakhs of rupees.
Travancore ..	7,129	3,428,975	128
Cochin ..	1,361	918,110	47
Pudukottai ..	1,178	411,878	16
Banganapalle ..	255	39,356	2·8
Sandur ..	161	13,517	1·7

Travancore—This State occupies the south-west portion of the Indian Peninsula, forming an irregular triangle with its apex at Cape Comorin. The early history of Travancore is in great part traditional; but there is little doubt that H. H. the Maharaja is the representative of the Chera dynasty, one of the three great Hindu dynasties which exercised sovereignty at one time in Southern India. The petty chiefs, who had subsequently set up as independent rulers within the State, were all subdued, and the whole country, included within its present boundaries, was consolidated and brought under one rule, by the Maharaja Marthanda Varma (1729-58). The English first settled at Anjengo, a few miles to the north of Trivandrum, and built a factory there in 1684. In the wars in which the East India Company were engaged in Madura and Tinnevelly, in the middle of the 18th century, the Travancore State gave assistance to the British authorities. Travancore was reckoned as one of the staunchest allies of the British Power and was accordingly included in the Treaty made in 1784 between the East India Company and the Sultan of Mysore. To protect the State from possible inroads by Tippu, an arrangement was come to in 1788 with the East India Company, and in 1795 a formal treaty was concluded, by which the Company agreed to protect Travancore from all foreign enemies. In 1805 the annual subsidy to be paid by Travancore was fixed at 8 lakhs of rupees.

The present ruler is His Highness Maharaja Sir Rama Varma, G.C.S.I., G.C.I.E., who was born in 1857 and ascended the masnad in 1885. The government is conducted in his name with the assistance of a Dewan (M. Krishnan Nair). The work of legislation is entrusted to a Council brought into existence in 1888. An assembly known as the Sri Mulam Popular Assembly meets once a year, when its members are able to bring suggestions *before the Dewan*. The State supports a military force of 1,471 men. Education has advanced considerably in recent years and the State takes a leading place in that respect. The principal food grain grown is rice, but the main source of agricultural wealth is the cocoanut. Other crops are pepper, areca-nut, jack-fruit and tapioca. Cotton weaving and the making of matting from the coir are the chief industries. The State is well provided with roads, and with a natural system of back-waters, besides canals and rivers navigable for country crafts. Two lines of railways intersect the country, the Cochin-Shoranore in the north-west and the Tinnevelly, Quilon passing through the heart of the State. A third line, from Quilon to Trivandrum, is in process of construction. The capital is Trivandrum.

Political Agent: H. L. Braidwood.

Cochin.—This State on the south-west coast of India is bounded by the Malabar District of the Madras Presidency and the State of Travancore. Very little is known of its early history. According to tradition, the Rajas of Cochin hold the territory in right of descent from Cheraman Perumal, who governed the whole country of Kerala, including Travancore and Malabar, as Viceroy of the Chola Kings about the beginning of the ninth century, and afterwards established himself as an independent Ruler. In 1502, the Portuguese were allowed to settle in what is now British Cochin and in the following year they built a fort and established commercial relations in the State. In the earlier wars with the Zamorin of Calicut, they assisted the Rajas of Cochin. The influence of the Portuguese on the west coast began to decline about the latter part of the seventeenth century, and in 1663 they were ousted from the town of Cochin by the Dutch with whom the Raja entered into friendly relations. About a century later, in 1759, when the Dutch power began to decline, the Raja was attacked by the Zamorin of Calicut, who was expelled with the assistance of the Raja of Travancore. In 1776, the State was conquered by Hyder Ali, to whom it remained tributary and subordinate, and subsequently to his son, Tippu Sultan. A treaty was concluded in 1791 between the Raja and the East India Company, by which His Highness agreed to become tributary to the British Government for his territories which were then in the possession of Tippu, and to pay a subsidy.

His Highness Sir Sri Rama Varmah, G.C.S.I., G.C.I.E., who was born in 1852, and who ascended the masnad in 1895, having abdicated in December, 1914, His Highness Sri Rama Varmah, who was born on 6th October, 1858, succeeded to the throne and was duly installed as Raja on the 21st January 1915. The administration is conducted under the control of the Raja whose chief Minister and Executive Officer is the Dewan (J. W. Bhore). The forests of Cochin form one of its most valuable assets. They abound in teak, ebony, blackwood, and other valuable trees. Rice forms the staple of cultivation. Cocoanuts are largely raised in the sandy tracts, and their products form the chief exports of the State. Communications by road and back-waters are good, and the State owns a line of railway from

Shoranore to Ernakulam, the capital of the State, and a Forest Steam Tramway used in developing the forests. The State supports a force of 25 officers and 251 men.

Political Agent : H. L. Braidwood.

Pudukottai.—This State is bounded on the north and west by Trichinopoly, on the south by Madura and on the east by Tanjore. In early times a part of the State belonged to the Chola Kings and the southern part to the Pandya Kings of Madura. Relations with the English began during the Carnatic wars. During the siege of Trichinopoly by the French in 1752, the Tondiman of the time did good service to the Company's cause by sending them provisions, although his own country was on at least one occasion ravaged as a consequence of his fidelity to the English. In 1756 he sent some of his troops to assist Muhammad Yusuf, the Company's sepoy commandant, in settling the Madura and Tinnevelly countries. Subsequently he was of much service in the wars with Haidar Ali. His services were rewarded by a grant of territory subject to the conditions that the district should not be alienated (1806). Apart from that there is no treaty or arrangement with the Raja. The present ruler is Sri Brihadamba Das, Sir Marthanda Bhairava Tondiman Bahadur, G.C.I.E., who is eighth in descent from the founder of the family. He succeeded in 1886. The Collector of Trichinopoly is ex-officio Political Agent for Pudukottai. The administration of the State, under the Raja, is entrusted to a State Council of three members, a Superintendent (Mr. Sidney Burn, I.C.S.) Dewan, and Councillor. The various departments are constituted on the British India model. The principal food crop is rice. The forests, which cover about one-seventh of the State, contain only small timber. There are no large industries. The State is well provided with roads, but Pudukottai is the only municipal town in the State.

Political Agent: E. S. Lloyd.

Banganapalle.—This is a small State in two detached portions which in the eighteenth century passed from Hyderabad to Mysore and back again to Hyderabad. The control over it was ceded to the Madras Government by the Nizam in 1800, and subsequently passed through a long period of mismanagement ending in the removal of the Nawab Fateh Ali Khan in 1905. The present ruler is Nawab Sayid Ghulam Ali Khan, Bahadur, who administers the State with the assistance of the Dewan, Khan Bahadur Khaja Akbar Hussain. The chief food grains grown are rice, wheat and cholam. Roads have recently been constructed and the capital Banganapalle, is being gradually opened up with broad thoroughfares. The Nawab pays no tribute and maintains no military force. Sericulture, lac cultivation, and weaving industries have lately been started in the State under the management of Mr. M. H. P. Ghataleh, the Superintendent of Industries, who is also the Private Secretary to the Nawab.

Political Agent: H. G. Stokes, C.S.I., I.C.S.

Sandur.—This is a small State almost surrounded by the District of Bellary the Collector of which is the Political Agent. Its early history dates from 1728 when it was first seized by an ancestor of the present Raja, a Maratha named Sidhoji Rao. It subsequently became a vassal to the Peshwa, after whose downfall a formal title for the State was granted by the Madras Government to one Siva Rao. The present ruler is H. H. Raja Srimant Venkata Rao, Rao Saheb Ghorpade, Mamulkat Madar, Senapathi, who was born in 1892. The State is administered by the Raja and the Dewan (M. R. R. A. Subraya Modliar Avergal). The Raja pays no tribute and maintains no military force. The most important staple crop is cholam. Teak and sandal wood are found in small quantities in the forests.

The minerals of the State possess unusual interest. The hematites found in it are probably the richest ore in India. An outcrop near the southern boundary forms the crest of a ridge 150 feet in height, which apparently consists entirely of pure steel grey crystalline hematite (specular iron) of intense hardness. Some of the softer ores used to be smelted, but the industry has been killed by the cheaper English iron. Manganese deposits have also been found in three places, and during 1911 to 1914 over 2,23,000 tons of manganese ore were transported by one company.

Political Agent: J. M. Turing, I.C.S.

UNDER THE GOVERNMENT OF BOMBAY.

More than a half of the total number of the very various units counted as Native States in India are under the Government of Bombay. The characteristic feature of the Bombay States is the great number of petty principalities; the peninsula of Kathiawar alone contains nearly two hundred separate States. The recognition of these innumerable jurisdictions is due to the circumstance that the early Bombay administrators were induced to treat the *de facto* exercise of civil and criminal jurisdiction by a landholder as carrying with it a quasi-sovereign status. As the rule of succession by primogeniture applies only to the larger principalities, the minor states are continually suffering disintegration. In Bombay, as in Central India, there are to be found everywhere the traces of disintegration and disorder left by the eighteenth century. In no part of India is there a greater variety of principalities. The bulk of them are of modern origin, the majority having been founded by Marathas in the general scramble for power in the middle of the eighteenth century, but several Rajput houses date from earlier times. Interesting traces of ancient history are to be found at Sachin, Janjira and Jafarabad, where chiefs of a foreign ancestry, descended from Abyssinian admirals of the Deccan fleets, still remain. A few aboriginal chiefs, Bhils or Kolis, exercise an enfeebled authority in the Dangs and the hilly country that fringes the Mahi and the Narbada rivers.

The control of the Bombay Government is exercised through Political Agents, whose positions and duties vary greatly. In some of the more important States their function are confined to the giving of advice and the

exercise of a general surveillance; in other cases they are invested with an actual share in the administration; while States whose rulers are minors—and the number of these is always large—are directly managed by Government officers. Some of the States are subordinate to other States, and not in direct relations with the British Government; in these cases the status of the feudatories is usually guaranteed by Government. The powers of the chiefs are regulated by treaty or custom, and range downwards to a mere right to collect revenue in a share of a village, without criminal or civil jurisdiction, as in the case of the petty chiefs of Kathiawar.

The Native States in the Bombay Presidency number 377. Area 65,761 square miles. Population (1911) 7,411,675. They are divided for administrative purposes into the following agencies:—Bijapur Agency, 2 states; Cutch Agency, 1 state; Dharwar Agency, 1 state (Savanur); Kaira Agency, 1 state (Cambay); Kathiawar Agency, 187 states (principal states, Bhavnagar, Dhrangadhra, Gondal, Junagadh, Nawanagar); West Khandesh Agency, 20 states; Kolaba Agency, 1 state (Janjira); Kolhapur Agency, 9 states (principal state; Kolhapur, with 9 feudatory states); Mahi Kantha Agency, 51 states (principal state, Idar); Nasik Agency, 1 state ((Surgana); Palanpur Agency, 17 states (principal state, Palanpur); Poona Agency, 1 state (Bhor); Rewa Kantha Agency, 62 states (principal State, Rajpipla); Satara Agency, 2 states; Savantvadi Agency, 1 state; Sholapur Agency, 1 state; Sukkur Agency, 1 state (Khairpur); Surat Agency, 17 states; Thana Agency,1 state (Janhar). The table below gives details of the area, etc., of the more important States:—

State.	Area in sq. miles.	Population.	Approx. Revenue in lakhs of rupees.
Bhavnagar ..	2,860	441,367	47
Cutch ..	7,616	513,429	25
Dhrangadhra ..	1,156	79,142	12
Gondal ..	1,024	161,916	15
Idar ..	1,669	202,811	6
Junagadh ..	3,284	434,222	26
Khairpur ..	6,050	223,788	15
Kolhapur ..	3,165	833,441	57
Navanagar ..	3,791	349,400	22
Palanpur ..	1,750	226,250	5
Rajpipla ..	1,517	161,588	9

Bijapur Agency.—This comprises the Satara Jahagir of Jat (980.8 square miles in area). The small Estate of Daflapur with an area of 96.8 square miles lapsed to the Jath Jahagir on the demise of its last ruler Rani Bai Saheb Dafle in January 1917. On the annexation of Satara, in 1849, Jath and Daflapur like other Satara Jahagirs, became feudatories of the British Government. The latter has more than once interfered to adjust the pecuniary affairs of the Jath Jahagir and in consequence of numerous acts of oppression on the part of the then ruler was compelled to assume direct management from 1874 to 1885. The Chief of Jath who belongs to the Maratha caste, is a Treaty Chief and ranks as a first class Sardar. He holds a sanad of adoption, and the succession follows the rule primogeniture. The gross revenue of the Agency is about 3 lakhs chiefly derived from land revenue. The Jath State pays to the British Government Rs. 6,400 per annum in lieu of horse contingent and Rs. 4,840 on account of Sardeshmukh rights.

Political Agent.—Jahangir Kaikhosru Navorji Kabraji, Collector of Bijapur.

Cutch.—The State is bounded on the north and north-west by Sind, on the east by the Palanpur Agency, on the south by the Peninsula of Kathiawar and the Gulf of Cutch and the south-west by the Indian Ocean. Its area, exclusive of the great salt marsh called the Rann of Cutch, is 7,616 square miles. The capital is Bhuj, where the ruling Chief (the Maharao His Highness Maha Rao Sri Khengaji Sayal Bahadur, G.C.S.I., G.C.I.E., resides. From its isolated position, the special character of its people, their peculiar dialect, and their strong feeling of personal loyalty to their ruler, the peninsula of Cutch has more of the elements of a distinct nationality than any other of the dependencies of Bombay. The earliest historic notices of the State occur in the Greek writers. Its modern history dates from its conquest by the Sind tribe of Samma Rajputs in the fourteenth century. The section of the Sammas forming the ruling family in Cutch were known as the Jadejas or 'children of Jada.' The British made a treaty with the State in 1815. There is a fair proportion of good arable soil in Cutch; and wheat, barley and cotton are cultivated. Both iron and coal are found but are not worked. Cutch is noted for its beautiful embroidery and silverwork and its manufactures of silk and cotton are of some importance. Trade is chiefly carried by sea. The ruling chief is the supreme authority. A few of the Bhayads are invested with jurisdictional powers in varying degrees in their own Estates and over their own ryots. A notable fact in connection with the administration of the Cutch State is the number and position of the Bhayad. These are Rajput nobles forming the brotherhood of the Rao. They were granted a share in the territories of the ruling chief as provision for their maintenance and are bound to furnish troops on an emergency. The number of these chiefs is 137, and the total number of the Jadeja tribe in Cutch is about 16,000. The British military force having been withdrawn from Bhuj, the State now pays Rs. 82,257 annually as an Anjar equivalent to the British Government. The military force consists of about 1,000 in addition to which, there are some irregular infantry, and the Bhayads could furnish on requisition a mixed force of four thousand.

Political Agent: Lt.-Col. C. F. Harold.

Dharwar Agency—This comprises only the small State of Savanur. The founder of the reigning family who are Mahomedans of Pathan origin was a jagirdar of Emperor Aurangzebe. At the close of the last Maratha War the Nawab of Savanur whose conduct had been exceptionally loyal was confirmed in his possessions

by the British Government. The State pays no tribute. The principal crop is cotton. The area is 70 square miles and population 17,909. The revenue is about one lakh. The present chief is Lieut. Abdul Majidkhan Dilerjang Bahadur.

Political Agent, E. G. Turner, I.C.S.

Kaira Agency.—This includes only the State of Cambay at the head of the Gulf of the same name. Cambay was formerly one of the chief ports of India and of the Anhilvada Kingdom. At the end of the thirteenth century it is said to have been one of the richest towns in India; at the beginning of the sixteenth century also it formed one of the chief centres of commerce in Western India. Factories were established there by the English and the Dutch. It was established a distinct State about 1730, the founder of the present family of Chiefs being the last but one of the Mahomedan Governors of Gujarat. The present Nawab is His Highness Mirza Hussein Yawar Khan who is a Shiah Mogul of the Najumisani family of Persia, and was born on the 16th May, 1911. His father, the late Nawab Jaffar Ali Khan, died on 21st January, 1915, leaving him a minor. The State is therefore under British Administration. The State pays a tribute of Rs. 21,924 to the British Government. Wheat and cotton are the principal crops. There is a broad gauge line from Cambay to Petlad, connecting with the B. B. & C. I. Railway at Anand. Cambay is a first class State having full jurisdiction. Revenue is about six lakhs. The area of the State is 350 square miles, population 72,656.

Political Agent, J. Ghosal. I.C.S.

Kathiawar Agency.- Kathiawar is the peninsula or western portion of the Province of Gujarat, Bombay. Its extreme length is about 220 miles and its greatest breadth about 165 miles, the area being 23,445 square miles. Of this total about 20,882 square miles with a population of 2,496,057 is the territory forming the Political Agency subordinate to the Government of Bombay, established in 1822, having under its control nearly 200 separate States whose chiefs divided amongst themselves the greater portion of the peninsula. The Kathiawar Agency is divided for administrative purposes into four prants or divisions—Jhalawar, *Halar*, Sorath and Gohelwar—and the States have since 1863 been arranged in seven classes. Since 1822 political authority in Kathiawar has been vested in the Political Agent subordinate to the Government of Bombay. In 1902 the designations of the Political Agent and his Assistants were changed to those of Agent to the Governor and Political Agents of the prants. Before 1865, except for the criminal court of the Agent to the Governor, established in 1831, to aid the Darbars of the several States in the trial of heinous crimes, interference with the judicial administration of the territories was diplomatic, not magisterial; and the criminal jurisdiction of the first and second-class chiefs alone was defined. In 1863, however, the country underwent an important change. The jurisdiction of all the chiefs was classified and defined: that of chiefs of the first and second classes was made plenary; that of lesser chiefs was graded in a diminishing scale. The four Political Agents of the prants resident in the four divisions of Kathiawar, now exercise residuary jurisdiction with large civil and criminal powers. Each Political Agent of a prant has a deputy, who resides at the headquarters of the prant or division, and exercises subordinate civil and criminal powers. Serious criminal cases are committed by the deputies to the court of the Agent to the Governor, to whom also civil and criminal appeals lie. The Agent to the Governor is aided in this work by an officer known as the Political Agent and Judicial Assistant, who is usually a member of the Indian Civil Service. Appeals from his decisions lie direct to the Governor of Bombay in Council in his executive capacity. Two Deputy Assistants also help the Agent.

Agent to the Governor in Kathiawar, Evan Maconochie, I.C.S.

Bhavnagar.—This State lies at the head and west side of the Gulf of Cambay. The Gohel Rajputs, to which tribe the Chief of Bhavnagar belongs, are said to have settled in the country about the year 1260, under Sajakji from whose three sons—Ranoji, Saranji and Shahji—are descended respectively the chiefs of Bhavnagar, Lathi and Palitana. An intimate connexion was formed between the Bombay Government and Bhavnagar in the eighteenth century when the chief of that State took pains to destroy the pirates which infested the neighbouring seas. The State was split up when Gujarat and Kathiawar were divided between the Peshwa and the Gaekwar; but the various claims over Bhavnagar were consolidated in the hands of the British Government in 1807. The State pays an annual tribute of Rs. 1,28,060 to the British Government, Rs. 3,581-8-0 as Peshkashi to Baroda, and Rs. 22,858 as Zortalbi to Junagadh. H. H. Maharaja Raol Shri Bhavsinghji, K.C.S.I., is the supreme and final authority in the State. The general administration is conducted under His Highness's directions by the Dewan (Mr. M. A. Tana), who is assisted by the Naib Dewan, the Personal Assistant and the Judicial Assistant. One noteworthy feature in the administration is the complete separation of judicial from executive functions and the decentralisation of authority is another. The authority and powers of all the Heads of Departments have been clearly defined, and each within his own sphere is independent of the others, being directly responsible to the Dewan.

The chief products of the State are grain, cotton and salt. The chief manufactures are oil, copper and brass vessels and cloth. The Bhavnagar State Railway is 205 miles in length, and the management of it undertakes also the working of the Dhrangadhra State Railway for a length of 40 miles. The capital of the State is the town and port of Bhavnagar, which has a good and safe harbour for shipping and carries on an extensive trade as one of the principal markets and harbours of export for cotton in Kathiawar. Bhavnagar supports 300 Imperial Service Lancers and 282 Infantry or Armed Police.

Dhrangadhra State is an uneven tract of land (intersected by small streams) which consists of hilly and rocky ground where stone is quarried. The chief of Dhrangadhra belongs to the Jhala tribe, originally a sub-division of the Makvana family This tribe is of

great antiquity, and is said to have entered Kathiawar from the north, establishing itself first at Patri in the Ahmedabad District, thence moving to Halvad and finally settling in its present seat. The greater part of this territory was probably annexed at one time by the Mahomedan rulers of Gujarat. Subsequently, during the reign of the Emperor Aurangzebe (1658–1707), the sub-division of Halvad, then called Muhammadnagar, was restored to the Jhala family. The petty States of Limbdi, Wadhwan, Chuda, Sayla, and Than-Lakhtar in Kathiawar are offshoots from Dhrangadhra; and the house of Wankaner claims to be descended from an elder branch of the same race. His Highness the Maharana Shri Sir Ghanshyamsinhji, K.C.S.I., is the ruling chief, who is the head of the Jhala Rajput family. The State pays a tribute of Rs. 40,671 to the British Government, and Rs. 4,006 to Junagadh State. The administration is conducted under the Maharaja's directions by the Dewan (Mansinh S. Jhala). The principal crops are cotton and grain. The Capital town is Dhrangadhra, a fortified town, 75 miles west of Ahmedabad.

Gondal State.—The Chief of Gondal is a Rajput of the Jadeja stock with the title of H. H. Thakore Sahib, the present Chief being H. H. Shri Bhagvat Sinhji, G.C.I.E. The early founder of the State, Kumbhoji I., had a modest estate of 20 villages. Kumbhoji II, the most powerful Chief of the House, widened the territories to almost their present limits by conquest; but it was left to the present ruler to develop its resources to the utmost, and in the words of Lord Reay, Governor of Bombay, by its "importance and advanced administration" to get it recognised as a First Class State. The State pays a tribute of Rs. 1,10,721. The chief products are cotton and grain and the chief manufactures are cotton and woollen fabrics and gold embroidery. Gondal has always been pre-eminent amongst the States of its class for the vigour with which public works have been prosecuted, and was one of the earliest pioneers of railway enterprise in Kathiawar, having initiated the Dhasa-Dhoraji line: it subsequently built other lines in partnership with other Native States in Kathiawar. There are no export and import dues, the people being free from taxes and dues. The Capital is Gondal, a fortified town on the line between Rajkot and Jetalsar.

Junagadh State.—This State has an area of 3,284 square miles and an average revenue of about 48 lakhs and is bounded on the north by the Bardas and Halar and on the west and south by the Arabian Sea. The river Saraswati, famous in the sacred annals of the Hindus, passes through the State. A sparsely wooded tract called the Gir, is contained in the State and is well known as the last haunt in India of the lion. Until 1472, when it was conquered by Sultan Mahmud Begra of Ahmedabad, Junagadh was a Rajput State, ruled by Chiefs of the Chudasama tribe. During the reign of the Emperor Akbar it became a dependency of Delhi, under the immediate authority of the Mughal Viceroy of Gujarat. About 1735, when the representative of the Mughals had lost his authority in Gujarat, Sher Khan Babi, a soldier of fortune, expelled the Mughal Governor, and established his own rule. The ruler of Junagadh first entered into engagements with the British Government in 1807. The Chief bears the title of Nawab, the present Nawab being tenth in succession from the founder of the family. He is His Highness Mahabat Khan, who was born in 1900 and succeeded in 1911. The agricultural products are cotton, shipped in considerable quantities from Veraval to Bombay, wheat and other grains. The coast line is well supplied with fair weather harbours. The State pays a tribute of Rs. 65,604 to the Gaekwar of Baroda and the British Government, but the Nawab receives contributions, called zortalbi, amounting to Rs. 92,421 from a number of chiefs in Kathiawar—a relic of the days of Mahomedan supremacy. The State maintains 100 Imperial Service Lancers. The Capital is Junagadh, situated under the Girnar and Datar hills, which is one of the most picturesque towns in India, while in antiquity and historical interest it yields to none. The Uparkot, or old citadel, contains interesting Buddhist caves, and the whole of the ditch and neighbourhood is honeycombed with caves or their remains. There are a number of fine modern buildings in the town.

Administrator, H. D. Rendall, I.C.S.

Navanagar State, on the southern shore of the Gulf of Cutch, has an area of 3,791 square miles. The Jam of Navanagar is a Jadeja Rajput by caste, and belongs to the same family as the Rao of Cutch. The Jadejas originally entered Kathiawar from Cutch; and dispossessed the ancient family of Jethwas (probably a branch of Jats) then established at Ghumli. The town of Navanagar was founded in 1540. The present Jam Sahib is the well-known cricketer, H. H. Jam Sahib Shri Ranjitsinhji Vibhaji, who was born in 1872 and succeeded in 1907. The principal products are grain and cotton, shipped from the ports of the State. A small pearl fishery lies off the coast. The State pays a tribute of Rs. 1,20,093 per annum jointly to the British Government, the Gaekwar of Baroda and the Nawab of Junagadh. The State maintains a squadron of Imperial Service Lancers. The Capital is Navanagar (or Jamnagar) a flourishing place, nearly 4 miles in circuit, situated 5 miles east of the port of Bedi. Population 349,400. Revenue nearly Rs. 40 lakhs.

Dewan, K. B. Merwanji Pestonji.

Kolaba Agency.—This Agency includes the State of **Janjira** in the Konkan, a country covered with spurs and hill ranges and much intersected by creeks and backwaters. The ruling family is said to be descended from an Abyssinian in the service of one of the Nizam Shahi Kings of Ahmednagar at the end of the fifteenth century. The most noticeable point in its history is the successful resistance that it alone, of all the states of Western India, made against the determined attacks of the Marathas. The British on succeeding the Marathas as masters of the Konkan refrained from interfering in the internal administration of the State. The chief is a Sunni Mahomedan; by race a Sidi or Abyssinian, with a title of Nawab. He has a sanad guaranteeing succession according to Mahomedan law and pays no tribute. Till 1868 the State enjoyed singular independence, there being no Political

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Agent, and no interference whatever in its internal affairs. About that year the maladministration of the chief, especially in matters of police and criminal justice, became flagrant; those branches of administration were in consequence taken out of his hands and vested in a Political Agent. The present ruler is H. H. Nawab Sidi Sir Ahmed Khan, G.C.I.E., who was born in 1862. The heir-apparent is Sidi Mahammad Khan, born on the 7th March 1914. The area of the State is 377 square miles, and the population 101,120. The average revenue is 6 lakhs. The State maintains a military force of 229 and an Imperial Service detachment of 29. The capital is Janjira, 44 miles south of Bombay Island. The Chief exercises full powers in Criminal, Civil and Revenue matters of the State including Jafarabad, a dependency of the Janjira State in Kathiawar. He is entitled to a dynastic salute of 11 guns.

Kolhapur Agency.—Kolhapur is a State with an area of 3,217 square miles and population of 833,441. Subordinate to Kolhapur are nine feudatories, of which the following five are important: Vishalgarh, Bavda, Kagal (senior), Kapsi and Ichalkaranji. The present ruling chief Col. Sir Shahu Chhatrapati Maharaja, G.C.S.I., G.C.I.E., G.C.V.O., traces his descent from a younger son of Shivaji, founder of the Maratha power. The prevalence of piracy from the Kolhapur port of Malvan compelled the Bombay Government to send expeditions against Kolhapur in 1765, and again in 1792, when the Raja agreed to give compensation for the losses which British merchants had sustained since 1785, and to permit the establishment of factories at Malvan and Kolhapur. Internal dissensions and wars with neighbouring States gradually weakened the power of Kolhapur. In 1812 a treaty was concluded with the British Government, by which, in return for the cession of certain ports, the Kolhapur Raja was guaranteed against the attacks of foreign powers; while on his part he engaged to abstain from hostilities with other States, and to refer all disputes to the arbitration of the British Government. The principal articles of production are rice, jawar and sugar-cane and the manufactures are coarse cotton and woollen cloths, pottery and hardware. The State pays no tribute, and supports a military force of 690. The nine feudatory estates are administered by their holders. Except in the case of two whose holders are minors, Kolhapur proper is divided into five pethas or talukas and four mahals and is managed by the Maharaja, who has full powers of life and death. The Southern Mahratta Railway passes through the State and is connected with Kolhapur City by a line which is the property of the State.

Resident and Senior Political Agent for Kolhapur and the Southern Mahratta Country—Lt.-Col. F. W. Wodehouse, C.I.E.

Southern Maratha Country States.—The Agency consists of the following eight States:—

Name of State.	Area in square miles.	Population.	Tribute to British Government.	Average revenue.
			Rs.	Rs.
Sangli	1,112	227,146	1,35,000	10,75,756
Miraj (Senior)	339	80,281	12,557	3,12,980
Miraj (Junior)	210	36,490	7,388	2,55,263
Kurundwad (Senior)	185	38,375	....	1,54,369
Kurundwad (Junior)	114	34,084	9,618	1,73,669
Jamkhandi	524	100,304	20,515	9,41,105
Mudhol	368	62,831	2,671	3,52,916
Ramdrug	169	36,610	....	1,50,729
Total ..	3,021	616,121	1,87,749	34,16,787

Mahi Kantha.—This group of States has a total area of 3,124 square miles and a population of 412,631 including that of *Idar* which is 202,811. The revenue is about 14 lakhs. The Agency consists of the first class State of Idar and 51 small States. The Native State of Idar covers more than half the territory. It has an area of 1,669 square miles and an average revenue of Rs. 8,65,345; eleven other States are of some importance; and the remainder are estates belonging to Rajput or Koli Thakurs, once the lawless feudatories of Baroda, and still requiring the anxious supervision of the Political Officer. H. H. Major-General Sir Partab Singh, a Rajput of the Rathor Clan, having been appointed regent of the State of Jodhpur, resigned the gadi of Idar in June 1911 and was succeeded by his adopted son Daulatsinhji, who is aged 39. His Highness has been on active service. Many relatives of the Maharaja and feudal chiefs whose ancestors helped to secure the country for the present dynasty, now enjoy large estates on service tenures, and there are numerous petty chiefs or *bhumias* who have held considerable estates from the time of the Raos of Idar, or earlier, and are under no obligation of service. The revenues of the State are shared by the Maharaja with these feudal chiefs. The Maharaja receives Rs. 52,427 annually on account of Khichdi and other Raj Haks from its subordinate Sardars, the tributory Talukas of the Mahi Kantha Agency and others, and pays Rs. 30,340 as tribute to the Gaekwar of Baroda through the British Government. The subordinate Sardars of Idar, known locally as pattawats, hold their estates on condition of military service, the quota being three horsemen for every 1,000

Rupees of Revenue; but for many years this service has not been exacted and no military force is maintained at present. The second class States are Polo, to the rulership of which the succession is disputed, and Danta, of which the ruler is Maharana Mamirsingji.

Political Agent—Lt.-Col. W. Beale.

Nasik Agency.—This consists of one State Surgana, lying in the north-west corner of the Nasik District. Surgana has an area of 360 square miles and a population of 15,180. The ruling chief is Prataprav Shankarrao Deshmukh, who is descended from a Maratha Pawar family. He rules the State subject to the orders of the Collector of Nasik. The revenue of the State is about Rs. 30,500.

Palanpur Agency.—This group of States in Gujarat comprises two first class States, Palanpur and Radhanpur, and a few minor States and petty talukas. Its total area is 6,393 square miles and the population is 515,092. The gross revenue is about 14½ lakhs. The territory included in the Agency has, like the more central parts of Gujarat, passed during historical times under the sway of the different Rajput dynasties of Anhilvada, the early Khilji and Tughlak Shahi dynasties of Delhi, the Ahmedabad Sultans, the Mughal Emperors, the Mahrattas, and lastly the British. The State from which the Agency takes its name is under the rule of H. H. Sir Sher Muhammad Khan, G.C.I.E., who is entitled Nawab and Dewan of Palanpur. He is descended from the Lohanis, an Afghan tribe who appeared in Gujarat in the fourteenth century. The connection of the British Government with the State dates from 1819 in which year the chief was murdered by a body of nobles. Two high roads from Ahmedabad pass through the State and a considerable trade in cotton cloth, grain, sugar and rice is carried on. The State maintains a constabulary force of 600 and pays tribute of Rs. 38,000 to the Gaekwar of Baroda. The capital is Palanpur, situated at the junction of the Palanpur-Deesa Branch of the B. B. & C. I. Railway. It is a very old settlement of which mention was made in the eighth century.

Political Agent—Lt.-Col. N. S. Coghill.

Radhanpur is a State, with an area of 1,150 square miles, which is held by a branch of the Babi family, who since the reign of Humayun have always been prominent in the annals of Gujarat. The present chief is H. H. Jalal-ud-din Khanji, the Nawab of Radhanpur. He has powers to try his own subjects even for capital offences without permission from the Political Agent. The State maintains a military force of 200. The principal products are cotton, wheat and grain. The capital is Radhanpur town, a considerable trade centre for Northern Gujarat and Cutch.

Rewa Kantha Agency.—This Agency, with an area of 4,956 square miles and a population of 665,099, comprises 61 States, of which Rajpipla is a first class State, 5 are second class, one is third class and the rest are either petty States or talukas. Among those petty States are Sanjeli in the north, Bhadarva and Umeta in the west, Narukot in the south-east, and two groups of Mehwas. The 26 Sankheda Mehwas petty estates lie on the right bank of the Narbada, while the 24 Pandu Mehwas petty estates including Dorka, Anghad and Raika, which together form the Dorka Mehwas are situated on the border of the Mahi.

The following are the statistics of area and population for the principal States :—

State.	Area in square miles.	Population.
Balasinor	189	40,563
Bariya	813	115,350
Chhota Udaipur	873	103,639
Lunavada	388	75,998
Narukot (Jambhughoda) ..	143	8,485
Rajpipla	1,517	161,588
Sunth	394	59,350
Other Jurisdictional States, Civil Stations and Thana Circles	639	100,126

Under the first Anhilvada dynasty (746-961), almost all the Rewa Kantha lands except Champaner were under the government of the Bariyas, that is, Koli and Bhil chiefs. In the eleventh, twelfth and thirteenth centuries chiefs of Rajput or part-Rajput blood, driven south and east by the pressure of Muhammadan invasions, took the place of the Koli and Bhil leaders. The first of the present States to be established was the house of the Raja of Rajpipla.

Political Agent—W. W. Smart, I.C.S.

Rajpipla.—This State lies to the south of the Narbada. It has an area of 1,517 square miles, and largely consists of the Rajpipla Hills which form the watershed between the Narbada and Tapti rivers. The family of the Raja of Rajpipla, H. H. Maharana Shri Vijayasinjhi is said to derive its origin from a Rajput of the Gohel clan. The State pays an annual tribute of Rs. 50,000 to the Gaekwar of Baroda. Cotton is the most important crop in the State. In the south there are valuable teak forests. The capital is Nandod, which is connected with Ankleśvar by railway built by the State.

Satara Jagirs.—Under this heading are grouped the following six States :—

State.	Area in sq. miles.	Population.	Revenue in lakhs.
Aundh ..	501	68,995	3
Phaltan ..	397	55,996	2
Bhor ..	925	144,601	5
Akalkot ..	498	89,082	4
Jath ..	884	69,810	2
Daphlapur ..	96	8,833	·20

These were formerly feudatory to the Raja of Satara. In 1849 five of them were placed under the Collector of Satara, and Akalkot under the Collector of Sholapur. Subsequently, the Jagir of Bhor was transferred to the Collector of Poona and Jath and Daphlapur to the Southern Mahratta country. The last two are now under the Collector of Bijapur. The ruling chiefs are as follows:—

State.	Ruling Chiefs.	Tribute to British Government.
		Rs.
Aundh ..	Bhavanrav Shrinivasrao *alias* Baba Saheb, Pant Pratinidhi.	....
Phaltan ..	Mudhojirav Janrav Nimbalkar	9,600
Bhor ..	H. H. Shankarrav Chimnaji, Pant Sachiv	4,684
Akalkot ..	Fatehsinh Shahai Raje Bhonsle *alias* Bapu Saheb	14,592
Jath ..	Ramrav Amritrav *alias* Aba Saheb Daphle	6,400
Daphlapur ..	Rani Bai Saheb Daphle, widow of Ramchandrarav Venkatrav Chavan Daphle.	....

Savantwadi.—This State has an area of 925 square miles and population of 217,240. The average revenue is 5¼ lakhs. It lies to the north of the Portuguese territory of Goa, the general aspect of the country being extremely picturesque. Early inscriptions take the history of the State back to the sixth century. So late as the nineteenth century the ports on this coast swarmed with pirates and the country was very much disturbed. The present chief is Khem Savant V, *alias* Bapu Saheb Bhonsle. Rice is the principal crop of the State, and it is rich in valuable teak. The sturdy Marathas of the State are favourite troops for the Indian Army and supply much of the immigrant labour in the adjacent British districts. The Capital is Savantvadi, also called Sundar Vadi, or simply Vadi.

Sholapur Agency.—This contains the State of Akalkot which forms part of the tableland of the Deccan. It has an area of 498 square miles and a population of 89,082. In the beginning of the eighteenth century the Akalkot territory, which had formerly been part of the Mussulman kingdom of Ahmednagar was granted by the Raja of Satara to a Maratha Sardar, the ancestor of the present chief, subject to the supply of a contingent of horse. In 1849 after the annexation of Satara, the Akalkot Chief became a feudatory of the British Government.

The Sukkur Agency.—This consists of the Khairpur State, a great alluvial plain in Sind. It has an area of 6,050 square miles and a population of 222,788, and revenue of over 20 lakhs, 59 thousands. The present chief, H. H. Mir Sir Imam Buksh Khan Talpur, G.C.I.E., belongs to a Baloch family called Talpur. Previous to the accession of this family on the fall of the Kalhora dynasty of Sind in 1783, the history of Khairpur belongs to the general history of Sind. In that year Mir Fatch Ali Khan Talpur established himself as Rais or ruler of Sind; and subsequently his nephew, Mir Sohrab Khan Talpur, founded the Khairpur branch of the Talpur family. In 1832 the individuality of the Khairpur State, as separate from the other Talpur Mirs in Sind, was recognised by the British Government in a treaty, under which the use of the river Indus and the roads of Sind were secured to the British. The chief products of the State are oil-seeds, ghee, hides, tobacco, fuller's earth, carbonate of soda, cotton, wool and grain. The manufactures comprise cotton fabrics and various kinds of silverware and metal work. There is an industrial school at the capital where lacquer work, carpets, pottery, etc., are produced. The Railway from Hyderabad to Rohri runs through the whole length of the State. The rule of the Mir is patriarchal, but many changes have been made in recent years introducing greater regularity of procedure into the administration. The Wazir, an officer lent from British service, conducts the administration under the Mir. The State supports a military force of 564 including an Imperial Service Camel and Baggage Corps which is 139 strong and is serving at the front.

Political Agent: The Collector of Sukkur E. L. Moysey, I.C.S.

Surat Agency.—This is a small group of three second class States under the superintendence of the Collector of Surat, W. F. Hudson.

State.	Ruling Chiefs.	Area in sq. miles.	Population.
Dharampur ..	Maharana Shri Mohandevji Narayandevji	704	114,995
Bansda ..	Maharaval Shri Indrasinhji Pratapsinhji	215	44,594
Sachin ..	Nawab Sidi Ibrahim Muhammad Yakut Khan Mubazarat Daula Nasrat Jung Bahadur.	42	18,903

The joint revenue of these states is 16½ lakhs. Tribute is paid to the British Government of Rs. 9,154. There is also attached to this Agency a tract of country known as the Dangs, which has an area of 999 square miles and a population of 29,353 and a revenue of Rs. 30,000. The country is divided into 14 Dangs or States of very unequal area, each under the purely nominal rule of a Bhil Chief with the title of Raja, Naik, Pradhan or Powar.

Thana Agency.—This includes the State of Jawhar, in the Thana District, on a plateau above the Konkan plain. It has an area of 310 square miles and a population of 53,489 and revenue of 2½ lakhs. Up to 1294, the period of the first Mahomedan invasion of the Deccan, Jawhar was held by a Varli, not a Koli chief. The first Koli chief, obtained his footing in Jawhar by a device similar to that of Dido, when she asked for and received as much land as the hide of a bull would cover. The Koli chief cut a hide into strips, and thus enclosed the territory of the State. The present chief is Raja Krishnashah Patangshah who administers the State, assisted by a Karbhari under the supervision of the Collector of Thana, S. M. Bharucha, who is Political Agent of the State.

UNDER THE GOVERNMENT OF BENGAL.

Cooch Behar.—This State, which at one time comprised almost the whole of the Northern Bengal, Assam and Bhutan, is a low-lying plain in North Bengal. It has an area of 1,307 square miles, a population of 5,93,052 and revenue of nearly 30 lakhs. The ruling chief is H. H. Maharaja Jitendra Narayan Bhup Bahadur who married Rani Indira Debi, eldest daughter of H. H Maharaja Rao Gaekwar of Baroda in 1913 and succeeded his brother Maharaja Raj Rajendra Narayan in the same year. His family is according to some ethnologists of either Dravidian or Mongolian origin or a mixture of both types, but according to others of Kshatriya origin. H. H. administers the State with the assistance of the State Council of which he is President. Cooch Behar once formed part of the famous kingdom of Kamrup. British connection with t began in 1772 when owing to inroads of the Bhuteas, the assistance of the East India Company was invited. The chief products of the State are rice, jute and tobacco. It maintains a military force of 194. The capital is Cooch Behar, which is reached by the Cooch Behar State Railway, a branch from the Eastern Bengal State Railway system.

Hill Tippera.—This State lies to the south of the district of Sylhet and consists largely of hills covered with bamboo jungles. It has an area of 4,086 square miles and a population of 229,513. The revenue from the State is about 10 lakhs and from the Zemindari in British territory a slightly smaller sum. The present Raja is Birendra Kishore Deb Barman Manikya, who is a Kshatriya by caste and comes of the Lunar race. The military prestige of the Tippera Rajas dates back to the fifteenth century and a mythical account of the State takes the history to an even earlier date. Both as regards its constitution and its relations with the British Government, the State differs alike from the large Native States of India, and from those which are classed as tributary. Besides being the ruler of Hill Tippera, the Raja also holds a large landed property called Chakla Roshnabad, situated in the plains of the Districts of Tippera, Naokhali and Sylhet. This estate covers an area of 600 square miles, and is held to form with the State an indivisible Raj. Disputes as to the right of succession have occurred on the occasion of almost every vacancy in the Raj, producing in times gone by disturbances and domestic wars, and exposing the inhabitants of the hills to serious disorders and attacks from the Kukis, who were always called in as auxiliaries by one or other of the contending parties. The principles which govern succession to the State have recently, however, been embodied in a sanad which was drawn up in 1904. The chief products of the State are rice and cotton, the traffic being carried chiefly by water. The administration is conducted by the Chief Dewan at Agartala, the Capital, assisted by two assistants.

Political Agent: J. Bartley, I.C.S.

UNDER THE GOVERNMENT OF BIHAR AND ORISSA.

Under this Government there are the Chota Nagpur political States of Kharsawan and Seraikela, and the Orissa feudatory States, 24 in number. The total area is 28,648 square miles, and the total population 3,942,972. The revenue is about 70 lakhs. The inhabitants are hill-men of Kolarian or Dravidian origin, and their condition is still very primitive. The chief of **Kharsawan** belongs to a junior branch of the Porahat Raja's family. The State first came under the notice of the British in 1793, when, in consequences of disturbances on the frontier of the old Jungle Mahals, the Thakur of Kharsawan and the Kunwar of Saraikela were compelled to enter into certain agreements relating to the treatment of fugitive rebels. The chief is bound, when called upon, to render service to the British Government, but he has never had to pay tribute. His present sanad was granted in 1899. He exercises all administrative powers, executive and judicial, subject to the control of the Deputy Commissioner of Singhbhum and the Commissioner of Chota Nagpur. The Bengal Nagpur Railway runs through a part of the State. The adjoining State of Seraikela is held by the elder branch of the Porahat Raja's family.

Orissa Feudatory States.—This group of 24 dependent territories is situated between the Mahanadi Delta and the Central Provinces, and forms the mountainous background of Orissa. The names of the individual States are Athgarh, Talcher, Mayurbhanj, Nilgiri,

Keonjhar, Pal Lahara, Dhenkanal, Athmallik, Hindol, Narsinghpur, Baramba, Tigiria, Khanpara, Nayagarh, Ranpur, Daspalla and Baud. To these there were added in 1905 the following States: Bamra, Rairakhol, Sonpur, Patna and Kalahandi from the Central Provinces, and Gangpur and Bonai from the Chota Nagpur States. The total population in 1915 was 3,798,038 with a revenue of about 60 lakhs. The Feudatory States have no connected or authentic history. Comprising the western and hilly portion of the province of Orissa they were never brought under the central government, but from the earliest times consisted of numerous petty principalities which were more or less independent of one another. They were first inhabited by aboriginal races, who were divided into innumerable communal or tribal groups each under its own chief or headman. These carried on incessant warfare with their neighbours on the one hand and with the wild beasts of the forests on the other. In course of time their hill retreats were penetrated by Aryan adventurers, who gradually overthrew the tribal chiefs and established themselves in their place. Tradition relates how these daring interlopers, most of whom were Rajputs from the north, come to Puri on a pilgrimage and remained behind to found kingdoms and dynasties. It was thus that Jai Singh became ruler of Mayurbhanj over 1,300 years ago, and was succeeded by his eldest son, while his second son seized Keonjhar. The chiefs of Baud and Daspalla are said to be descended from the same stock; and a Rajput origin is also claimed by the Rajas of Athmallik, Narsinghpur, Pal Lahara, Talcher and Tigiria. Nayagarh, it is alleged, was founded by a Rajput from Rewah, and a scion of the same family was the ancestor of the present house of Khandpara. On the other hand, the chiefs of a few States, such as Athgarh, Baramba and Dhenkanal, owe their origin to favourites or distinguished servants of the ruling sovereigns of Orissa. The State of Ranpur is believed to be the most ancient, the list of its chiefs covering a period of over 3,600 years. It is noteworthy that this family is admittedly of Khond origin, and furnishes the only known instance in which, amid many vicissitudes, the supremacy of the original settlers has remained intact. The States acknowledged the suzerainty of the paramount power and were under an implied obligation to render assistance in resisting invaders; but in other respects neither the ancient kings of Orissa nor their successors, the Mughals and Marathas, ever interfered with their internal administration. All the States have annals of the dynasties that have ruled over them; but they are made up in most part of legend and fiction and long genealogical tables of doubtful accuracy, and contain very few features of general interest. The British conquest of Orissa from the Marathas, which took place in 1803, was immediately followed by the submission of ten of the Tributary States the chiefs of which were the first to enter into treaty engagements.

The States have formed the subject of frequent legislation of a special character. They were taken over from the Marathas in 1803 with the rest of Orissa; but, as they had always been tributary states rather than regular districts of the native governments they were exempted from the operation of the general regulation system. This was on the ground of expediency only and it was held that there was nothing in the nature of British relations with the proprietors that would preclude their being brought under the ordinary jurisdiction of the British courts, if that should ever be found advisable. In 1882 it was held that the States did not form part of British India and this was afterwards accepted by the Secretary of State.

The staple crop in these States is rice. The forests in them were at one time among the best timber producing tracts in India, but until lately forest conservancy was practically unknown. The States have formed the subject of frequent legislation of a special character. The relations with the British Government are governed mainly by the sanads granted in similar terms to all the chiefs in 1894. They contain ten clauses reciting the rights, privileges, duties and obligations of the chiefs, providing for the settlement of boundary disputes, and indicating the nature and extent of the control of the Political Agent.

Political Agent: L. E. B. Cobden-Ramsay, C.I.E., I.C.S.

UNDER THE GOVERNMENT OF THE UNITED PROVINCES.

Three States: Rampur, Tehri and Benares are included under this Government:—

State.	Area Sq. Miles.	Population.	Revenue in lakhs.
Rampur ..	892	531,898	45
Tehri (Garhwal)	4,200	299,853	6
Benares ..	988	....	....

Rampur is a fertile level tract of country. The ruler Colonel His Highness Alijah Farzandi-i-Dilpizir-i-Daulet-i-Inglishia, Mukhlic-ud-Daulah, Nasr-ul Mulk, Amir-ul-Umara, Nawab Sir Syed Mohammed Hamid Ali Khan Bahadur Mustaid Jang, G.C.I.E., G.C.V.O., A.D.C., to His Imperial Majesty the King Emperor. Born 31st August 1875, descended from the famous Sadats of Bahera. Succeeded in February 1889. His Highness is the sole surviving representative of the once great Rohilla power in India. He is the Premier Chief in the United Provinces, and rules over a territory of 892 square miles with a population of 531,217. His Highness is an enlightened Prince and is well educated in Arabic, Persian and English languages. He is a keen supporter of education for Mohammedans, and has travelled extensively in America and Europe. During the Mutiny of 1857 the then Nawab of Rampur displayed his unswerving loyalty to the

British Government by affording pecuniary aid, protecting the lives of Europeans, and rendering other valuable services which were suitably recognised by the Paramount power. This State contributes towards the defence of the Indian Empire by maintaining a well-equipped and well trained battalion of Imperial service infantry and a cavalry unit consisting of two squadrons.

The Imperial Service Infantry has served at the Front and a detachment of Imperial Service Lancers is training Government horses at the Remount Depot, Aurangabad.

His Highness has 3 sons, the eldest Sahibzada Syed Raza Ali Khan Bahadur being the heir apparent.

The State has as income of over £300,000 (three hundred thousand pounds) a year.

Tehri State (or Tehri Garhwal).—This State lies entirely in the Himalayas and contains a tangled series of ridges and spurs radiating from a lofty series of peaks on the border of Tibet. The sources of the Ganges and the Jumna are in it. The early history of the State is that of Garhwal District, the two tracts having formerly been ruled by the same dynasty. Parduman Shah, the last Raja of the whole territory, was killed in battle, fighting against the Gurkhas; but at the close of the Nepalese War in 1815, his son received from the British the present State of Tehri. During the Mutiny the latter rendered valuable assistance to Government. He died in 1859 without issue, and was succeeded by his near relative Bhawani Shah; and he subsequently received a sanad giving him the right of adoption. The present Raja Lt. H. H. Narendra Shah Bahadur is a minor and is being educated at the Mayo College. The principal product is rice, grown on terraces on the hill sides. The State forests are very valuable and there is considerable export of timber. The Raja has full powers within the State. A unit of Imperial Service Sappers is maintained. The capital is Tehri, the summer capital being Pratapnagar 8,000 feet above the sea level.

Political Agent: the Commissioner of Kumaon

Benares.—The founder of the ruling family of Benares was one Mansa Ram, who entered the service of the Governor of Benares under the Nawab of Oudh in the early eighteenth century. His son, Balvant Singh, conquered the neighbouring countries and created a big state out of them over which he ruled till 1770. Raja Chet Singh succeeded him, but was expelled by Warren Hastings in 1781. In 1794, owing to the maladministration of the estates which had accumulated under the Raja of Benares, an agreement was concluded by which the lands held by the Raja in his own right were separated from the rest of the province, of which he was simply administrator. The direct control of the latter was assumed by the Government, and an annual income of one lakh of rupees was assured to the Raja, while the former constituted the Domains. Within the Domains the Raja had revenue powers similar to those of a Collector in a British District, which were delegated to certain of his own officials. There was thus constituted what for over a century was known as the Family Domains of the Maharaja of Benares. On the 1st of April 1911 these Domains became a State consisting of the parganas of Bhadohi (or Konrh) and Chakia (or Kera Mangraur) with the fort of Ramnagar. The Maharaja's powers are those of a ruling chief, subject to certain conditions, of which the most important are the maintenance of all rights acquired under laws in force prior to the transfer, the reservation to Government of the control of the postal and telegraph systems, of plenary criminal jurisdiction within the State over servants of the British Government and European British subjects, and of a right of control in certain matters connected with excise. The present ruler is H. H. Maharaja Sir Prabhu Narayan Singh Bahadur, G.C.I.E., who was born in 1855 and succeeded to the State in 1889.

UNDER THE GOVERNMENT OF THE PUNJAB.

Under this Government there are 34 states, varying considerably in size and importance. Area, 36,532 square miles. Population (1911), 4,212,794. Revenue, about £1,000,000.

The Punjab states may be grouped under three main classes. The hill States, 23 in number, lie among the Punjab Himalayas and are held by some of the most ancient Rajput families in all India. Along the western half of the southern border lies the Muhammadan state of Bahawalpur. The remaining States, including the Sikh principalities of Patiala, Jind, Nabha, Kapurthala, Faridkot and Kalsia, and the Muhammadan chiefships of Maler Kotla, Pataudi, Loharu and Dujana, lie east of Lahore, and, with insignificant exceptions, occupy the centre of the eastern plains of the province.

The list below gives details of the area, population, and revenue of the more important states:—

Name.	Area square miles.	Population.	Revenue Approx. in lakhs.
Bahawalpur ..	15,000	780,394	27
Chamba ..	3,216	134,851	7
Faridkot ..	642	130,374	8
Jind ..	1,259	271,728	15
Kapurthala ..	630	268,244	25
Maler Kotla ..	167	71,144	14½
Mandi ..	1,200	181,110	5
Nabha ..	928	248,892	15
Patiala ..	5,412	1,407,659	72
Sirmur (Nahan)..	1,198	138,564	8

Bahawalpur.—This State, which is about 300 miles in length and about 40 miles wide, is divided lengthwise into three great strips. Of these, the first is a part of the Great Indian Desert; the central tract is chiefly desert, not capable of cultivation, identical with the Bar or Pat uplands of the Western Punjab; and the third, a fertile alluvial tract in the river valley, is called the Sind. The ruling family claims descent from the Abbaside Khalifas of Egypt. The tribe originally came from Sind, and assumed independence during the dismemberment of the Durrani empire. On the rise of Ranjit Singh, the Nawab made several applications to the British Government for an engagement of protection. These, however, were declined, although the Treaty of Lahore in 1809, whereby Ranjit Singh was confined to the right bank of the Sutlej, in reality effected his object. The first treaty with Bahawalpur was negotiated in 1833, the year after the treaty with Ranjit Singh for regulating traffic on the Indus. It secured the independence of the Nawab within his own territories, and opened up the traffic on the Indus and Sutlej. During the first Afghan War the Nawab rendered assistance to the British and was rewarded by a grant of territory and life pension. On his death the succession was disputed and for a time the State was in the hands of the British. The present Nawab is H. H. Nawab Sadiq Muhammad Khan, who was born in 1904 and succeeded in 1907. During his minority the State is managed by a Council of Regency. The chief crops are wheat, rice and millet. The Lahore-Karachi branch of the North-Western State Railway passes through the State. The State supports an Imperial Service Silladar Camel Transport Corps consisting of 355 men and 1,144 camels, in addition to other troops. The capital is Bahawalpur, a walled town built in 1748.

Political Agent: W. C. Renouf, I.C.S.

Chamba.—This State is enclosed on the west and north by Kashmir, on the east and south by the British districts of Kangra and Gurdaspur, and it is shut in on almost every side by lofty hill ranges. The whole country is mountainous and is a favourite resort of sportsmen. It possesses a remarkable series of copper plate inscriptions from which its chronicles have been completed.

Founded probably in the sixth century by Marut, a Surajbansi Rajput, who built Brahmapura, the modern Barmaur, Chamba was extended by Meru Varma (680) and the town of Chamba built by Sahil Varma about 920. The State maintained its independence, until the Moghal conquest of India.

Under the Moghals it became tributary to the empire, but its internal administration was not interfered with, and it escaped almost unscathed from Sikh aggression. The State first came under British influence in 1846. The part, west of the Ravi, was at first handed over to Kashmir, but subsequently the boundaries of the State were fixed as they now stand, and it was declared independent of Kashmir. The present chief is H. H. Raja Sir Bhure Singh, K.C.S.I., C.I.E., who was born in 1869, and succeeded in 1904. The principal crops are rice, maize and millets. There are some valuable forests which were partly leased to Government in 1864 for a term of 99 years, but the management of them has now been retroceded to the Chamba Durbar. The mountain ranges are rich in minerals which are little worked. The principal road to Chamba town is from Pathankot, the terminus of the Amritsar Pathankot branch of the North-Western Railway. The Raja is head of the judicial department and is assisted by the Wazir-i-Wazarats. Chamba town, on the right bank of the Ravi, contains a number of interesting temples, of which that of Lakshmi Narayan, dating possibly from the tenth century, is the most famous.

Faridkot.—The ruling family of this sandy level tract of land belongs to the Sidhu-Barar clan of the Jats, and is descended from the same stock as the Phulkian houses. Their occupation of Faridkot and Kot Kapura dates from the time of Akbar, though quarrels with the surrounding Sikh States and internal dissensions have greatly reduced the patrimony.

The present chief, H. H. Raja Brij Indar Singh Bahadur, was born in 1896, and succeeded in 1906. During his minority the administration is carried on by a council under the presidency of an Extra Assistant Commissioner. The State supports one company of Imperial Service Sappers.

Jind.—The three Native States of Jind, Patiala and Nabha form collectively the Phulkian States, the most important of the Cis-Sutlej States. This area is the ancestral possession of the Phulkhian houses. It lies mainly in the great natural tract called the Jangal (desert or forest), but stretches north-east into that known as the Pawadh and southwards across the Ghaggar into the Nardak, while its southernmost tract, round the ancient town of Jind, claims to lie within the sacred limits of Kurukshetra. This vast tract is not, however, the exclusive property of the States; for in it lie several islands of British territory, and the State of Maler Kotla enters the centre of its northern border. On the other hand, the States hold many outlying villages surrounded by British territory.

The history of Jind as a separate State dates from 1763 when the confederated Sikhs captured Sirhind town and partitioned the whole Jind Province. The Maharaja of Jind, H. H. Maharaja Sir Ranbir Singh, G.C.I.E, K.C.S.I., was born in 1879 and succeeded in 1887. He is descended from the ancestors of the Phulkian family. During the Sikh War and the Mutiny the Raja of Jind was of great service to the British and was rewarded with a grant of nearly 600 square miles of land. The principal crops are wheat, barley and gram. The only industries of importance are the manufactures of gold and silver ornaments, leather and woodwork and cotton cloth. The capital is Sangrur which is connected by a State Railway with the North-Western Railway. Under His Highness' Court there is a Council Wizarat which controls all the departments of the State.

Kapurthala.—This State consists of three detached pieces of territory in the great plain of the Doab. The ancestors of the chief of Kapurthala at one time held possessions both in the Cis and Trans-Sutlej and also in the Bari

Doab. In the latter lies the village of Ahlu, whence the family springs, and from which it takes the name of Ahluwalia. Some of these estates were confiscated after the first Sikh War and when the Jullundur Doab came under the dominion of the British Government in 1846, the estates north of the Sutlej were maintained in the independent possession of the Ahluwalia chieftain, conditional on his paying a commutation in cash for the service engagements by which he had previously been bound to Ranjit Singh. The Bari Doab estates have been released to the head of the house in perpetuity, the civil and police jurisdiction remaining in the hands of the British authorities. For good services during the Mutiny, the Raja was rewarded with a grant of other States in Oudh in which, however, he exercises no ruling powers, though in Oudh he is, to mark his superiority, addressed as Raja-i-Rajagan. The present chief is H. H. Maharaja Sir Jagatjit Singh Bahadur, G.C.S.I., who was born in 1872 and succeeded in 1877. He was granted the title of *Maharaja* as an hereditary distinction in 1911. The chiefs of Kapurthala are Sikhs. Sardar Jassa Singh was always known as Jassa Kalal; but the family claim descent from Rana Kapur, a semi-mythical member of the Rajput house of Jaisalmer, who is said to have left his home and founded Kapurthala 900 years ago. Only a small proportion of the population however are Sikhs, the majority being Mahomedans. The chief crops are wheat, gram, maize, cotton and sugar-cane. The town of Sultanpur in this State is famous for hand-painted cloths. The main line of the North-Western Railway passes through part of the State and the Grand Trunk Road runs parallel to it. A branch railway from Jullundur City to Ferozepur passes through the State. Kapurthala maintains a battalion of Imperial Service infantry and a small force of local troops. The capital is Kapurthala, which is said to have been founded in the eleventh century.

Agent to the Lieutenant-Governor for Kapurthala, the Commissioner of the Jullunder Division.

Maler Kotla.—This State consists of a level sandy plain bounded by the district of Ludhiana on the north and by Patiala territory elsewhere. The Nawabs of Maler Kotla are of Afghan descent, and originally held positions of trust in the Sirhind province under the Moghal Emperors. As the Empire sank into decay during the eighteenth century, the local chiefs gradually became independent. The result was constant feuds with the adjacent Sikh States. After the victory of Laswari, gained by the British over Sindhia in 1803 and the subjugation and flight of Holkar in 1805, when the Nawab of Maler Kotla joined the British army, the British Government succeeded to the power of the Marathas in the districts between the Sutlej and the Jumna. The final treaty which affirmed the dependence of the State on the British Government was signed after the submission of Ranjit Singh in 1809. The present Nawab is H. H. Nawab Ahmud Ali Khan Bahadur, K.C.S.I., who was born in 1881 and succeeded in 1908. He was created Hon. Major in the Indian Army for his services during the war. The chief products are cotton, sugar and opium. The State supports two double companies of Imperial Service Sappers. The capital is Maler Kotla. Revenue 14½ lakhs.

Mandi.—This is a mountainous State in the upper reaches of the Beas. It has a history of considerable length, as it once formed part of the Suket State. Its relations with the British were determined after the battle of Sobraon in 1846. The present minor chief H. H. Raja Jogindra Sen was installed in 1913. The administration is carried on by Mr. J. R. S. Parsons, I.C.S., the Superintendent, and Mahta Ganda Mal, Assistant Superintendent. The principal crops are rice, maize, wheat and millet. About three-fifths of the State are occupied by forest and grazing lands. It is rich in minerals. The capital is Mandi, founded in 1527, which contains several temples and other buildings of interest and is one of the chief marts for commerce with Ladakh and Yarkhand.

Nabha.—Nabha which became a separate State in 1763 is one of the 3 Phulkian States —Nabha, Patiala and Jind and though second in point of population and revenue of the 3 sister States, it claims seniority being descended from the eldest branch. It consists of two distinct parts, the main portion comprising 12 separate pieces of territory scattered among the other Punjab States and Districts, forms the City of Nabha and the *Nizamats* of Phul and Amloh; the second portion forms the *Nizamat* of Bawal in the extreme south-east of the Punjab on the border of Rajputana; this Nizamat of Bawal was subsequently added to its territory as a reward from the British Government for the loyalty of the Rulers of Nabha. The State now covers an area of about 1,000 square miles and has a population of about 3 lakhs. The present Ruler is Shri Maharaja Ripudaman Singhji Malavendra Bahadur, who was born in 1883 and succeeded his father in 1911. The administration of the State is carried on by His Highness the Maharaja assisted by a Council of Ministers. The High Court is the head of the Judicial Department. The State supports one battalion of Imperial Service Infantry consisting of 600 men; besides this there are local forces of Infantry, cavalry and artillery, etc., consisting of about 1,000 men all told and also a Transport Corps. For the preservation of the peace there is a Police force consisting of about 600 men.

The State is traversed by the main and 3 branch lines of the N. W. Railway and the Rajputana Malwa Railway crosses the *Nizamat* of Bawal. A large portion of the State is irrigated by the Sirhind Canal. The crops of the State are gram, pulses, bajra, sugarcane, cotton, wheat and barley; to facilitate trade the Darbar has opened grain markets and Banks near the principal railway stations within the State territory; The chief industries of the State consists of the manufacture of silver and gold ornaments, brass utensils, and cotton carpets, lace and *gota*, etc. There are some ginning factories and a cotton steam press in the State which are working successfully. The State has so far contributed roughly about 30 lakhs of rupees to the various funds in connection

with the War, including a fully equipped Hospital Ship for Mesopotamia, people of the State have subscribed about 7 lakhs to the Indian War Loan.

Patiala.—This is the largest of the Phulkian States, but its territory is scattered and interspersed by small estates and even single villages belonging to other villages and British districts. It also comprises a portion of the Simla hills and territory on the border of Jaipur and Alwar States. Area 5,951 square miles. Population 1,407,659. Its history as a separate State begins in 1762. During the Sikh War and the Mutiny, the Maharaja was loyal and was substantially rewarded. The present Chief H. H. Lieut.-Colonel Maharajadhiraja Sri Sir Bhupindar Singh Mahindar Bahadur, G.C.I.E., was born in 1891 and succeeded in 1900. During his minority his administrative functions were exercised by a council of regency consisting of three members. The principal crops are gram, barely and wheat. Cotton and tobacco are also grown in parts of the State. A great part of the State is irrigated by the Sirhind and Western Jumna Canal distributaries. It possesses valuable forests. The State is rich in antiquities especially at Pinjaur, Sunam and Sirhind. The North-Western Railway, the E. I. Railway, and a branch of the B. B. & C. I. Railway traverse the State. It contains an Imperial Service contingent, of a regiment of cavalry and two battalions of infantry.

In 1900 it was decided by the Government of India to appoint a Political Agent for Patiala, and the other two Phulkian States of Jind and Nabha were included in the Agency, to which was afterwards added the Mahomedan State of Bahawalpur. The headquarters of the Agency are at Patiala. Gross income, 90 lakhs.

Sirmur (Nahan).—This is a hilly State in the Himalayas under the Political control of the Commissioner of Ambala Division. Its history is said to date from the 11th century. In the eighteenth century the State was able to repulse the Gurkha invasion, but in 1793 the Gurkhas were invited to aid in the suppression of an internal revolt in the State and they in turn had to be evicted by the British. In 1857 the Raja rendered valuable services to the British, and during the second Afghan War he sent a contingent to the North-West Frontier. The present Chief is H. H. Raja Amar Parkash Bahadur, K.C.S.I., who was born in 1888 and succeeded in 1911. The main agricultural feature of the State is the recent development of the Kiarda Dun, a fertile level plain which produces wheat, gram, rice, maize and other crops. The State forests are valuable and there is an iron foundry at Nahan which was started in 1867 but, being unable to compete with the imported iron, is now used for the manufacture of sugar-cane crushing mills. The State supports an Imperial Service Corps of Sappers and Miners which served in the Tirah Expedition of 1897 and has been serving in the war. It was captured with General Townshend's force at Kut-al-Amara but the Corps has since been re-constituted and has again gone on service.

UNDER THE GOVERNMENT OF BURMA.

Under this Government there are four Shan States, two in the Mandalay Division (Hkmati Long and Mong Mit); and two in the Sagaing Division (Hsawnghsup and Singkaling Hkmati), the area of which is 7,374 square miles and the population about 67,051, consisting chiefly of Buddhists. There are in addition 48 petty States, 5 in the Northern Shan States, 43 in the Southern Shan States, with an area of 58,835 square miles and a population of 1,358,498 consisting of Buddhists and Animists.

The Shan States—though a portion of British India, do not form part of Burma proper and are not comprised in the regularly administered area of the Province. They lie for the most part to the east of Upper Burma. They owed allegiance to the Burmese Government, but were administered by their own rulers (Sawbwas) and the British Government has continued to a certain extent the semi-independence which it found existing in 1885. As at present defined, the Shan States are divided into—

1. States under the supervision of the Superintendent, Northern Shan States, whose headquarters are at Lashio; area 14,294 square miles and population 58,952.

2. States under the supervision of the Superintendent and Political Officer, Southern Shan States, whose head quarters are at Taunggyi; area 40,434 square miles and population 900,202;

There are five States in the Northern and 38 in the Southern Shan States. There are in addition two Shan States under the supervision of the Commissioner of the Mandalay Division, namely, Hkmati Long in the unadministered territory to the north of the Myitkyina District and Mong Mit lying north-east of the Ruby Mines District. In the north-west of the Upper Chindwin District towards Manipur there are two small Shan States, Hsawnghsup and Singkaling Hkamti, whose administration is supervised by the Commissioner of the Sagaing Division.

The Northern Shan States are North Hsenwi in the north, South Hsenwi near the Salween in the east, Manglon in the south-east, Hsipaw in the south-west, and Tawngpeng in the north-west. The Wa States east of the Salween can hardly be said to be under British control. In ordinary matters the States are administered by their Sawbwas, who are assisted by amats, or ministers, in various departments. The Superintendent exercises general control over the jurisdiction of justice and is vested with wide revisionary powers. In revenue matters the Sawbwas administer their States in accordance with local customs which have been but little modified. Of prime importance in the economy of the country is the Mandalay Lashio railway, 180 miles in length, of which 126 miles lie within the Northern Shan States. The line is a single track, and was constructed in the face of considerable engineering diffi-

culties, of which not least the notable was the Gokteik gorge, now spanned by a viaduct. It had been proposed to continue the railway about 90 miles farther east to the Kunlong, where is a ferry over the Salween, and eventually to penetrate into Yunnan; but this extension is for the present in abeyance.

The most important of the Southern Shan States are Kengtung and Yawnghwe. Under the supervision of the Superintendent and Political Officer and his Assistants, the chiefs —known as Sawbwas, Myozas, and Ngwegunhmus—control their own States, exercising revenue, civil and criminal jurisdiction therein. There are in all 9 Sawbwas, 18 Myozas and 11 Ngwegunhmus.

Karenni.—This district consists of five States, with a total area of approximately 4,200 square miles and a population of about 64,000, lying on the frontier south of the Shan States. The largest State is Kantarawadi with an area of 3,000 square miles, a population of nearly 40,000, and a gross revenue of about 1¼ lakhs of rupees. More than half of the inhabitants belong to the Red Karens, a people low in the scale of civilisation. An Assistant Political Officer is posted at Loikaw as Agent of the British Government, and a certain amount of control is exercised through him over the chiefs. The principal wealth of the country is teak timber, and the considerable alien population is largely supported by the timber trade, which, however, has declined greatly in the last few years. The Karens themselves are distinguished as hunters.

UNDER THE GOVERNMENT OF ASSAM.

The only State of importance under the Chief Commissioner of Assam is **Manipur**, which has an area of 8,456 square miles and a population of 346,222, of which about 60 per cent. are Hindus, and 36 per cent. animistic forest tribes. Manipur consists of a great tract of hilly country and a valley, about 30 miles long 20 miles wide, which is shut in on every side. The State adopted Hinduism in the early eighteenth century, when it came under a Naga Raja who subsequently made several invasions into Burma. On the Burmese retaliating, Manipur negotiated a treaty of alliance with the British, in 1762. The Burmese again invaded Manipur during the first Burmese War and on the conclusion of peace, in 1826, Manipur was declared independent. The chief event in its subsequent history was the intervention of the British in 1891 to establish the claim of Kula Chandra Singh as Maharaja, followed by the treacherous murder of the Chief Commissioner, Mr. Quinton and the officers with him and the withdrawal of the escort which accompanied him. From 1891 to 1908 the State was administered by a Political Agent and Superintendent of the State during the minority of H. H. Raja Chura Chand Singh. The Raja was invested with ruling powers in 1908. The administration of the State is now conducted by the Durbar, consisting of the Raja as President, a vice-president, a member of the Indian Civil Service whose services are lent to the State, three ordinary and three additional members who are all Manipuris. The staple crop of the country is rice. Forests of great variety cover the whole of the hill ranges.

Khasi and Jaintia Hills.—These petty chiefships, 25 in number, with a total area of about 3,900 square miles and a population of 126,000, are included under the Government of Assam. Most of the States have treaties or engagements with the British Government. The largest of them is Khyrim, the smallest is Nonglewai, which has a population of 169. Most of them are ruled by a chief or Siem. The Siemship usually remains in one family, but the succession was originally controlled by a small electoral body constituted from the heads of certain priestly clans. Of recent years there has been a tendency to broaden the elective basis, and the constitution of a Khasi State has always been of a very democratic character, a Siem exercising but little control over his people. Among many of the north-east frontier tribes there is little security of life and property, and the people are compelled to live in large villages on sites selected for their defensive capabilities. The Khasis seem, however, to have been less distracted by internal warfare, and the villages, as a rule, are small.

UNDER THE GOVERNMENT OF THE CENTRAL PROVINCES.

The Central Provinces include fifteen feudatory States subordinate to the administration, with an area of 31,174 square miles and a population of 2,117,002. One of the States, Makrai, lies within Hoshangabad District; the remainder are situated in the Chhattisgarh Division, to the different districts of which they were formerly attached. Their relations with Government are controlled by a Political Agent. The States vary greatly in size and importance. Sakti the smallest, having an area of 138 square miles and Bastar the largest an area of 13,062 square miles. They are administered by hereditary chiefs, who hold on conditions of loyalty and good government set forth in patents and acknowledgments of fealty, but are nominally free from direct interference save in the case of sentences of death, which require the Chief Commissioner's confirmation. But, as a fact, the Government has exercised a very large amount of control, owing mainly to the frequency with which the States have been taken under direct management, because of either the minority or the misconduct of the chief.

The States pay a tribute to Government which amounts in the aggregate to about 2½ lakhs.

Statistics relating to the chief States are contained in the following table:—

State	Area.	Population 1911.	Revenue (approximate) in Lakhs.
	Sq. Miles.		
Bastar ..	13,062	433,310	3
Jashpur ..	1,963	174,458	1
Kanker ..	1,429	127,014	2
Khairagarh ..	931	155,471	3
Nandgaon ..	871	167,362	4
Raigarh ..	1,486	218,860	2
Surguja ..	6,055	248,703	2
Eight other States.	5,377	411,824	6
Total ..	31,174	2,117,002	23

Bastar.—This State, which lies to the south-east corner of the Provinces, is the most important of the group. It has an area of 13,067 square miles and a population of 433,310. The family of the Raja is very ancient, and is stated to belong to the Rajputs of the Lunar race. Up to the time of the Marathas, Bastar occupied an almost independent position, but a tribute was imposed on it by the Nagpur government in the eighteenth century. At this period the constant feuds between Bastar and the neighbouring State of Jeypore in Madras kept the country for many years in a state of anarchy. The chief object of contention was the Kotapad tract, which had originally belonged to Bastar, but had been ceded in return for assistance given by Jeypore to one of the Bastar chiefs during some family dissensions. The Central Provinces Administration finally made this over to Jeypore in 1863, on condition of payment of tribute of Rs. 3,000, two-thirds of which sum was remitted from the amount payable by Bastar. By virtue of this arrangement the tribute of Bastar was, until recently, reduced to a nominal amount. The cultivation of the State is extremely sparse. Rice is the most important crop. The State is ruled by the feudatory Chief. The Dewan of the State is a retired Deputy Commissioner of the Central Provinces who has three assistants under him. After a recent period of disturbance the State has returned to complete tranquility and precautions are being taken to remove all causes of unrest by better supervision over the minor State officials and a very considerate forest policy. The chief town is Jagdalpur on the Indravati River.

Surguja.—Until 1905 this was included in Chota Nagpur State of Bengal. The most important feature is the Manipat, a magnificent tableland forming the southern barrier of the State. The early history of Surguja is obscure; but according to a local tradition in Palamau, the present ruling family is said to be descended from a Raksel Raja of Palamau. In 1758 a Maratha army overran the State, and compelled its chief to acknowledge himself a tributary of the Bhonsla Raja. At the end of the eighteenth century, in consequence of the chief having aided a rebellion in Palamau against the British, an expedition entered Surguja; and, though order was temporarily restored, disputes again broke out between the chief and his relations, necessitating British interference. Until 1818 the State continued to be the scene of constant lawlessness; but in that year it was ceded to the British Government under the provisional agreement concluded with Mudhoji Bhonsla of Berar, and order was soon established. The principal crops are rice and other cereals. The population is mainly aboriginal, the wild Korwa tribe being a perpetual source of trouble. A band of them committed several murders and robberies in 1910.

KASHMIR.

Kashmir (known to Indians as Jammu) lies to the east of the Indus and to the west of the Ravi. It is a mountainous country with just a strip of level land along the Punjab frontier, and intersected by valleys of which many are of surpassing beauty and grandeur. It may be divided physically into two areas: the north-eastern comprising the area drained by the Indus with its tributaries, and the south-western, including the country drained by the Jhelum, the Kishanganga and the Chenab. The dividing line between those two areas is the great central mountain range. The area of the State is 84,432 square miles, and the population 3,158,126.

HISTORY.—Various poets have left more or less trustworthy records of the history of the valley down to 1586, when it was conquered by Akbar. Srinagar, the capital, had by then been long established, though many of the fine buildings erected by early Hindu rulers had been destroyed by the Mahomedan kings who first appeared in the 12th century. In the reign of Sikandar the population became almost entirely Mahomedan. Akbar visited the valley three times. Jehangir did much to beautify it; but after Aurangzebe there was a period of disorder and decay, and by the middle of the eighteenth century the *Subah* of Kashmir was practically independent of Delhi. Thereafter it experienced the oppression of Afghan rule until it was rescued, in 1819, by an army sent by Ranjit Singh. Sikh rule was less oppressive than that of the Afghans. The history of the State as at present constituted is practically that of one man, a Dogra Rajput, Gulab Singh of Jammu. For his services to the Sikhs this remarkable man had been made Raja of Jammu in 1820, and he added largely to his territory by conquest. He held aloof from the war between the British and the Sikhs, only appearing as mediator after the battle of Sobraon

(1846) when the British made over to him for Rs. 75 lakhs the present territories of the State. He had to fight for the valley and subsequently lost part of his State, Gilgit, over which the successors had at a heavy cost to reassert their claims. His son Ranbir Singh, a model Hindu, ruled from 1857 to 1885, when he was succeeded by his eldest son Major-General H. H. Maharaja Sir Partab Singh, G.C.S.I., G.C.I.E.

ADMINISTRATION.—For some years the Maharaja took no part in the administration of the State, but since 1905 he has exercised full powers, assisted by a Chief Minister—Rai Saheb Diwan Amar Nath, C.I.E.—a Home Minister, and a Revenue Minister. The four chief executive officers are the Governors of Jammu and of Kashmir, the Wazir Wazarat of Gilgit and the Wazir Wazarat of Ladakh. The real administrative power lies with the petty subordinate officers (tahsildars) who exercise revenue, civil, and criminal jurisdiction with regular stages of appeal: but distance and the absence of easy communications are practical checks on the use or abuse of appeals. The British Resident has his headquarters at Srinagar; there is also a Political Agent at Gilgit responsible to the Government of India for the administration of the outlying petty States; and a British Officer is stationed at Leb to assist in the supervision of Central Asian trade. In the Dogras the State has splendid materials for an Army, which consists of 6,961 troops, of whom 3,370 are maintained as Imperial Service troops.

FINANCE.—The financial position of the State is strong, and it has more than 46 lakhs invested in Government of India securities. The total revenue last year was 93 lakhs, the chief items being land revenue, forests, customs and octroi.

PRODUCTION AND INDUSTRY.—The population is pre-eminently agricultural and pastoral. The system of land tenure has been described as "ryotwari in ruins," great complexity existing owing to the fact that there is no local law of rent and revenue. The principal food crop is rice, maize, cotton, saffron, tobacco, hops (autumn crops) and wheat, barley, poppy, beans (spring crops) are also grown. Sheep are largely kept. The State forests are extensive and valuable. Exploration for minerals has not been attempted on sound principles. Vast fields of friable, dusty coal have been found. Gold has been found at Gulmarg and Sapphires in Padar. The industries of manufacture are chiefly connected with sericulture (the silk filature at Srinagar, the largest in the world, was destroyed by fire in July 1912), oil-pressing and the manufacture of wine. The woollen cloth, shawls, and wood carving of the State are famous.

COMMUNICATIONS.—The State contains only 16 miles of railway on the Tawi-Suchetgarh branch of the N.-W. Railway. The Jhelum is the only navigable river. At present there is much activity in improving road communications, but in many parts of the country wheeled traffic is unknown.

PUBLIC WORKS.—In 1904, a flood spill chann above Srinagar was constructed with a view to minimising the constant risk of floods; and it was hoped that the danger would be still further reduced by the carrying out of a scheme for lowering a part of the bed of the Jhelum, which has since been taken in hand. Good progress has been made with irrigation; but the most important schemes of recent years have been those for an electrical power station on the Jhelum River, and for a Railway into Kashmir. It was proposed to supply from this power station electrical energy for various State schemes (including the Jhelum dredging scheme) and for private enterprise and possibly for working the proposed Kashmir Railway. The works were completed about 1907, and the scheme according to the latest reports is working very satisfactorily. The proposal for a railway to Kashmir had been under discussion for many years, the nature of the country making the question of route a difficult one. In 1905, a decision was taken in favour of a line from Srinagar *via* the Jhelum Valley and Abbottabad, but the project has remained in abeyance pending the consideration of further schemes, among which are proposals for lines of ropeway from Jammu to Srinagar and from Srinagar to the western borders *via* the Jhelum Valley.

EDUCATION.—In educational matters Kashmir is the most backward tract in the whole of India. In the State as a whole only 2 in every 100 persons can read and write. The number of educational institutions has increased from 45 in 1891 to 379 in 1911.

Resident:—Lieut-Colonel A. D. A. G. Bannerman, C. V. O., C. I. E.

Political Agent, at Gilgit—Major C. A. Smith.

Native States' Tribute.

Many of the States pay tribute, varying in amount according to the circumstances of each case, to the British Government. This tribute is frequently due to exchanges of territory or settlement of claims between the Governments, but is chiefly in lieu of former obligations to supply or maintain troops. The actual annual receipts in the form of tribute and contributions from Native States are summarised in the following table. The relations of the States to one another in respect of tributes are complicated, and it would serve no useful purpose to enter upon the question. It may, however, be mentioned that a large number of the States of Kathiawar and Gujarat pay tribute of some kind to Baroda, and that Gwalior claims tribute from some of the smaller States of Central India :—

States paying tribute directly to the Government of India.

	£	
Tribute from Jaipur	26,667	
„ „ Kotah	15,648	
„ „ Udaipur	13,333	
„ „ Jodhpur	6,533	
„ „ Bundi	8,000	
„ „ Other States	15,170	
		85,351
Contribution of Jodhpur towards cost of Erinpura Irregular Force	7,667	
„ of Kotah towards cost of Deoli Irregular Force	13,333	
„ of Bhopal towards cost of Bhopal Levy	10,753	
„ of Jaora towards cost of United Malwa Contingent	9,142	
Contributions towards cost of Malwa Bhil Corps	2,140	
		43,035
Fees on succession		3,437
Total		131,823
Central Provinces and Berar.		
Tribute from various States	....	15,696
Burma.		
Tributes from Shan States	28,524	
„ „ other States	1,367	
		29,891
Eastern Bengal and Assam.		
Tribute from Manipur	3,333	
„ „ Rambrai	7	
		3,340
Bengal.		
Tribute from various States	....	4,514 (Cooch Behar).
United Provinces.		
Tribute from Benares	12,667	
„ „ Kapurthala (Bahraich)	8,733	21,400
Punjab.		
Tribute from Mandi	6,667	
„ „ other States	3,086	
Fees on succession	133	
		9,886
Madras.		
Tribute from Travancore	53,333	
Peshkash and subsidy from Mysore	233,333	
„ „ „ „ Cochin	13,333	
„ „ „ „ Travancore	888	
		300,887
Bombay.		
Tribute from Kathiawar	31,129	
„ „ various petty States	2,825	
Contribution from Baroda State	25,000	
„ „ Jagirdars, Southern Mahratta Country	5,765	
Subsidy from Cutch	5,484	
Fees on succession	3,457	
		73,660
Grand Total	....	591,097

It was announced at the Coronation Durbar of 1911 that there would in future be no Nazarana payments on successions. The details given above are for 1915.

Foreign Possessions in India.

Portugal and France both hold small territorial possessions in the Indian Peninsula.

The Portuguese possessions in India consist of the province of Goa, situated within the limits of the Bombay Presidency, on the Arabian Sea coast; the territory of Daman with the small territory called Pragana-Nagar Avely on the Gujarat coast, at the entrance to the Gulf of Cambay; and the little island of Diu, with two places called Gogla and Simbor, on the southern extremity of the Kathiawar Peninsula.

GOA.

Goa forms a compact block of territory surrounded by British districts. Savantwadi State lies to the north of it, the Arabian Sea on the west and North Kanara on the south, and the eastern boundary is the range of the Western Ghats, which separates it from the British districts of Belgaum and North Kanara. The extreme length from north to south is 62 miles and the greatest breadth from east to west 40 miles. The territory has a total area of 1,301 square miles and consists of the *Velhas Conquistas*, or Old Conquests, comprising the island of Goa, acquired by the Portuguese in 1510, and the neighbouring districts of Salsette and Bardez, acquired in 1543; and of the *Novas Conquistas*, or New Conquests, comprising the districts of Pernem, Sanquelim, Satary, Ponda, Sanguem, Quepem and Canacona, acquired in the latter half of the 18th century. The small island of Angediva situated opposite the port of Karwar, in the British district of North Kanara, forms administratively a portion of the province of Goa. This was acquired in 1505. The whole country is hilly, especially the eastern portion, the predominating physical feature being the Eastern Ghats, which besides bounding the country along the north-east and south-east, jut off westward and spread across the country in a succession of spurs and ridges. There are several conspicuous isolated peaks, of which the highest, Sonsagar, is 3,827 feet high.

The country is intersected by numerous rivers running westward from the Ghats, and the principal eight, which are all navigable, are in size of some importance. Goa possesses a fine harbour, formed by the promontaries of Bardez and Salsette. Half-way between these extremities lies the *cabo*, or cape, which forms the extremity of the island of Goa. This divides the whole bay into two anchorages, known as Aguada and Marmagao. Both are capable of accommodating the largest shipping from September to May, but Aguada is virtually closed during the south-west monsoon, owing to the high winds and sea and to the formation of sand bars across the estuary of the Mandovi river, which opens into Aguada. Marmagao is accessible at all times and is therefore the harbour of commercial importance. It is the terminus of the railway running to the coast from the inland British system of lines, a breakwater and port have been built there and the trade is considerable, being chiefly transit trade from British territory.

The People.

The total population in the whole Goa territory was 486,752 at the census of 1910. This gives a density of 343 persons to the square mile and the population showed an increase of 6 per cent. since the census ten years previously. In the Velhas Conquistas 91 per cent. of the population is Christian. In the Novas Conquistas Christians and Hindus are almost equally numerous. The Moslems in the territory are numbered in a few thousands. The Christians still very largely adhere to caste distinctions, claiming to be Brahmans, Charados and low castes, which do not intermarry. The Hindus are largely Maratha and do not differ from those of the adjacent Konkan districts of Bombay. All classes of the people, with the exception of Europeans, use the Konkani dialect of Marathi, with some admixture of Portuguese words. The official language is Portuguese, which is commonly spoken in the capital and the principal towns, as well as by all educated people. Nearly all the Christians profess the Roman Catholic religion and are spiritually subject to an archbishop, who has the titles of Primate of the East and Patriarch of the East Indies and exercises ecclesiastical jurisdiction also over a great portion of British India. (The Christians of Daman and Diu are subject to a Bishop who bears the titles of Bishop of Daman and Archbishop of Cranganore.) There are numerous churches in Goa, mostly built by the Jesuits and Franciscans prior to the extinction of the religious orders in Portuguese territory. The churches are in charge of secular priests. Hindus and Mahomedans now enjoy perfect freedom in religious matters and have their own places of worship. In the early days of Portuguese rule the worship of Hindu gods in public and the observance of Hindu usages were strictly forbidden and rigorously suppressed.

The Country.

One-third of the entire territory of Goa is stated to be under cultivation. A regular land survey was only recently made. The fertility of the soil varies considerably according to quality, situation and water-supply. The Velhas Conquistas are as a rule better cultivated than the Novas Conquistas. In both these divisions a holding of fifteen or sixteen acres would be considered a good sized farm, and the majority of holdings are of smaller extent. The staple produce of the country is rice, of which there are two good harvests, but the quantity produced is barely sufficient to meet the needs of the population for two-thirds of the year. Next to rice, the culture of cocoanut palms is deemed most important, from the variety of uses to which the products are applied. Hilly places and inferior soils are set apart for the cultivation of cereals and several kinds of fruits and vegetables are cultivated to an important extent. The condition of the agricultural classes in the Velhas Conquistas has improved during recent years, owing to the general rise in the prices of all classes of agricultural produce and partly to the current of emigration to British territory. Stately forests are found in the Novas Con-

quistas. They cover an area of 116 square miles and are under conservation and yield some profit to the administration. Iron is found in parts of the territory, but has not been seriously worked. Manganese also exists and was worked to an important extent a few years ago.

Commerce.

In the days of its glory, Goa was the chief entrepot of commerce between East and West and was specially famous for its trade in horses with the Persian Gulf. It lost its commercial importance with the downfall of the Portuguese empire and its trade is now insignificant. Few manufacturing industries of any moment exist, and most manufactured articles in use are imported. Exports chiefly consist of cocoanuts, betel nuts, mangoes and other fruits and raw produce. A line of railway connects Marmagao with the Madras and Southern Mahratta Railway. Its length from Marmagao to Castle Rock, above the Ghats, where it joins the British system, is 51 miles, of which 49 are in Portuguese territory. The railway is under the management of the Madras and Southern Mahratta Railway administration, and the bulk of the trade of Marmagao port is what it brings down from and takes to the interior. The telegraphs in Goa territory are worked as part of the system of British India, and are maintained jointly by the British and Portuguese Governments. The Goa territory was formerly subject to devastating famines and the people now suffer heavy losses in times of drought. They are then supplied, though at great cost, with rice from British territory.

The Capital.

Nova Goa, the present capital of Portuguese India, comprehends Panjim and Ribandar, as well as the old city of Goa, and is six miles in extent. Old Goa is some five miles distant from the new city. Panjim occupies a narrow strip of land leading up to the Cabo, the cape dividing the Aguada bay from that of Marmagoa, and mainly slopes down to the edge of the Aguada. It was selected as the residence of the Portuguese Viceroy in 1759, and in 1843 it was raised to its present rank as the capital of Portuguese India. The appearance of the city, with its row of public buildings and elegant private residences, as seen from the water, is very picturesque and this impression is not belied by a closer inspection of its neat and spacious roads, bordered by decent, tidy houses. The most imposing public structures are the barracks, an immense quadrangular building the eastern wing of which accommodates the Lyceum, the Public Library and the Government Press. Other noticeable buildings are the Cathedral and various churches, the vice-regal palace, the High Court and so on. The square in the lower part of the town is adorned with a life-sized statue of Albuquerque standing under a canopy.

History.

Goa was captured for the Portuguese by Alfonso de Albuquerque in 1510. Albuquerque promptly fortified the place and established Portuguese rule on a firm basis. From this time Goa rapidly rose in importance and became the metropolis of Portuguese power in the East. There was constant fighting with the armies of the Bijapur kingdom, but the Portuguese held their own and gained the surrounding territory now known as the Velhas Conquistas.

The subsequent history of the town is one of ostentation and decay. Goa reached its summit of prosperity at the end of the sixteenth century. The accounts of travellers show that the Goa of those days presented a scene of military, ecclesiastical and commercial magnificence which has had no parallel in the British capitals of India. But the Portuguese based their dominion in India on conquest by the sword and they laboured to consolidate it by a proselytizing organisation which throws the missionary efforts of every other European power in India into the shade. Old Goa, as the ruins of the old capital are called to-day, had a hundred churches, many of them of magnificent proportions, and the Inquisition was a power in the land. The result showed how rotten was this basis and how feebly cemented the superstructure reared upon it.

Modern Times.

There was frequently recurring fighting and in 1741 the Marathas invaded the neighbourhood of Goa and threatened the city itself. An army of 12,000 men arrived from Portugal at the critical moment. The invaders were beaten off, and the Novas Conquistas were added to the Portuguese possessions. In 1844 the shelter given by Goa to fugitives from justice in British territory threatened to bring about a rupture with the British Government at Bombay. In 1852 the Ranes of Satari, in the Novas Conquistas revolted. In 1871 the native army in Goa mutinied and the king's own brother came from Lisbon to deal with the trouble and having done so disbanded the native army, which has never been reconstituted. But another outbreak among the troops took place in 1895 and the Ranes joining them the trouble was again not quieted until the arrival of another special expedition from Lisbon. The Ranes again broke out in 1901 and again in 1912, troops being again imported to deal with the last outbreak, which was only reported concluded in the summer of 1913.

Administration.

Goa is regarded as an integral portion of the Portuguese Empire and, with Daman and Diu, forms for administrative purposes one province subject to a Governor-General, who is appointed directly by the Lisbon Government and holds office for five years. Besides his civil functions, he is invested with supreme military authority in the province.

The Governor-General is aided in his administration by a Council composed of a Chief Secretary, the Judges of the High Court, the two highest military officers in Goa, the Attorney-General, the Inspector da Fazenda, the Health Officer and the President of the Municipal Chamber or Corporation of the capital (Camara Municipal das Ilhas), which is the oldest Municipal body in the East. As a rule, all the members give their

opinions and vote in every matter on which they are consulted by the Governor-General. There are five other juntas, or councils, called the Junta Geral da Provincia (general council of the province), the Conselho da Provincia (the council of the province), the Conselho Technico das Obras publicas, the Conselho-Inspector de Instruccao publica, and the Conselho de Agricultura. The first of these is composed of the Chief Secretary, the Archbishop or his substitute, the Attorney-General the Inspector da Fazenda, Inspector of Public Works, the Health Officer a Professor of the Medico-Surgical College, a Professor of the Lyceum, or educational College, a Professor of the Normal School and a representative from each of the Municipal Corporations of the province.

In addition to this machinery of administration there are subordinate agencies for the local government of every district.

The Lisbon Government by a recent Decree, dated the 27th July 1917, have established new rules regarding the administration of Portuguese India, but those rules are not in force as yet.

DAMAN.

The settlement of Daman lies at the entrance to the Gulf of Cambay, about 100 miles north of Bombay. It is composed of two portions, namely, Daman proper, lying on the coast, and the detached pargana of Nagar Aveli, separated from it by a narrow strip of British territory and bisected by the B. B. & C. I. Railway. Daman proper contains an area of 22 square miles and 26 villages and has a population (1910) of 18,300. Nagar Aveli has an area of 60 square miles and a population (1910) of 29,020. The town of Daman was sacked by the Portuguese in 1531, rebuilt by the natives and retaken by the Portuguese in 1558, when they made it one of their permanent establishments in India. They converted the mosque into a church and have since built eight other places of worship. Of the total population the number of Christians is 1,586. The number of houses is 8,971, according to the same census. The native Christians adopt the European costume, some of the women dressing themselves after the present European fashion, and others following the old style of petticoat and mantle once prevalent in Spain and Portugal.

The soil of the settlement is moist and fertile, especially in the pargana of Nagar Aveli, but despite the ease of cultivation only one-twentieth part of the territory is under tillage. The principal crops are rice, wheat, the inferior cereals of Gujarat and tobacco. The settlement contains no minerals. There are stately forests in Nagar Aveli, and about two-thirds of them consist of teak, but the forests are not conserved, and the extent of land covered by each kind of timber has not been determined. Before the decline of Portuguese power in the East, Daman carried on an extensive commerce, especially with the east coast of Africa. In those days it was noted for its dyeing and weaving.

The territory forms for administrative purposes a single district and has a Municipal Chamber and Corporation. It is ruled by a Governor invested with both civil and military functions, subordinate to the Governor-General of Goa. The judicial department is administered by a judge, with an establishment composed of a delegate of the Attorney-General and two clerks. In Nagar Aveli the greater part of the soil is the property of the Government, from whom the cultivators hold their tenures direct. A tax is levied on all lands, whether alienated or the property of the State. The chief sources of revenue are land-tax, forests, excise and customs duties.

DIU.

Diu is an island lying off the southern extremity of the Kathiawar Peninsula, from which it is separated by a narrow channel through a considerable swamp. It is composed of three portions, namely, Diu proper (island), the village of Gogla, on the Peninsula, separated by the channel, and the fortress of Simbor, about 5 miles west of the island. It has a small but excellent harbour, where vessels can safely ride at anchor in two fathoms of water and owing to the great advantages which its position offers for trade with Arabia and the Persian Gulf, the Portuguese were fired at an early period with a desire to obtain possession of it. This they gained, first by treaty with the Sultan of Gujarat and then by force of arms. Diu became opulent and famous for its commerce. It has now dwindled into insignificance. The extreme length of the island is about seven miles and its breadth, from north to south, two miles. The area is 20 square miles. The population of the town of Diu, from which the island takes its name, is said to have been 50,000 in the days of its commercial prosperity. The total population of the island, according to the census of 1910, is 14,170, of whom 271 were Christians.

FRENCH POSSESSIONS.

The French possessions in India comprise five Settlements, with certain dependent lodges, or plots. They aggregate 203 square miles, and had a total population in 1912 of 282,386. The first French expedition into Indian waters, with a view to open up commercial relations, was attempted in 1603. It was undertaken by private merchants at Rouen, but it failed, as also did several similar attempts which followed. In 1642 Cardinal Richelieu founded the first Campagnie d'Orient, but its efforts met with no success. Colbert reconstituted

the Company on a larger basis in 1664, granting exemption from taxes and a monopoly of the Indian trade for fifty years. After having twice attempted, without success, to establish itself in Madagascar, Colbert's Company again took up the idea of direct trade with India and its President, Caron, founded in 1668 the Comptoir, or agency, at Surat. But on finding that city unsuited for a head establishment he seized the harbour of Trincomalee in Ceylon from the Dutch. The Dutch, however, speedily retook Trincomalee; and Caron, passing over to the Coromandel coast, in 1672 seized St. Thome, a Portuguese town adjoining Madras, which had for twelve years been in the possession of Holland. He was, however, compelled to restore it to the Dutch in 1674.

The ruin of the Company seemed impending when one of its agents, the celebrated Francois Martin, suddenly restored it. Rallying under him a handful of sixty Frenchmen, saved out of the wreck of the settlements at Trincomalee and St. Thome, he took up his abode at Pondicherry, then a small village, which he purchased in 1683 from the Raja of Gingee. He built fortifications, and a trade began to spring up; but he was unable to hold the town against the Dutch, who wrested it from him in 1693, and held it until it was restored to the French by the Peace of Ryswick in 1697. Pondicherry became in this year, and has ever since remained, the most important of the French Settlements in India. Its foundation was contemporaneous with that of Calcutta. Like Calcutta, its site was purchased by a European Company from a native prince, and what Job Charnock was to Calcutta Francois Martin proved to Pondicherry. On its restitution to the French by the Peace of Ryswick in 1697, Martin was appointed Governor, and under his able management Pondicherry became an entrepôt of trade.

Chandernagar, in Lower Bengal, had been acquired by the French Company in 1688, by grant from the Delhi Emperor; Mahe, on the Malabar Coast, was obtained in 1725-6, under the government of M. Lenoir; Karikal, on the Coromandel Coast, under that of M. Duma, in 1739. Yanam, on the coast of the Northern Circars, was taken possession of in 1750, and formally ceded to the French two years later.

Administration.

The military command and administration-in-chief of the French possessions in India are vested in a Governor, whose residence is at Pondicherry. The office is at present held by Monsieur A. Martineau. He is assisted by a Secretaire General and by several "Chefs de Service" in the different administrative departments, and by a Chief Judicial Officer. In 1879 local councils and a council-general were established, the members being chosen by a sort of universal suffrage within the French territories. Seventeen Municipalities, or Communal Boards, were erected in 1907, namely Pondicherry, Arian coupam, Modeliarpeth, Oulgaret, Villenour, Eiroubouvane, Bahour and Nettapacam, for the establishment of Pondicherry; Karikal, Neravy, Nedouncadou, Tirumalar, Grande Aldee, Cotchery, for the establishment of Karikal, and also Chandernagar, Mahe and Yanam. On municipal boards natives are entitled to a proportion of the seats. Civil and criminal courts, courts of first instance and a court of appeal compose the judicial machinery. The army and establishments connected with the Governor and his staff at Pondicherry, and those of the local governors or administrators at Chandernagar, Yanam, Mahe and Karikal, together with other headquarters charges, necessarily engross a large proportion of the revenue. All the state and dignity of an independent Government, with four dependent ones, have to be maintained. This is effected by rigid economy, and the prestige of the French Government is worthily maintained in the East. Pondicherry is also the scene of considerable religious pomp and missionary activity. It forms the seat of an Archbishop, with a body of priests for all French India; and of the Missions Etrangeres, the successors of the Mission du Carnatic founded by the Jesuits in 1776. But the chief field of this mission lies outside the French Settlements, a large proportion of its Christians are British subjects and many of the churches are in British territory. The British rupee is the only legal tender within French territories. A line of railway running *via* Villenour, from Pondicherry to Villupuram on the South Indian Railway, maintains communication with Madras and the rest of British India, and Karikal is linked to the same railway by the branch from Peralam. A Chamber of Commerce consisting of fourteen members, nine of them Europeans or persons of European descent, was reorganised by a decree of 7th March, 1914. The capital, Pondicherry, is a very handsome town, and presents, especially from the sea, a striking appearance of French civilisation.

People and Trade.

The Settlements are represented in Parliament at Paris by one senator and one deputy. These are at the present time Mons. E. Flandin and Mons. P. Bluysen, respectively. There were in 1916, 61 primary schools and 3 colleges, all maintained by the Government, with 386 teachers and 9,088 pupils. Local revenue and expenditure (budget of 1917) Rs. 19,22,080. The principal crops are paddy, groundnut, and ragi, There are at Pondicherry 5 cotton mills, and at Chandernagar 1 jute mill; the cotton mills have, in all, 1,622 looms and 73,092 spindles, employing 12,020 persons. There are also at work one oil factory and a few oil presses for groundnuts, one ice factory, one ironworks and a cocotine factory. The chief exports from Pondicherry are oilseeds. At the ports of Pondicherry, Karikal, and Mahe in 1916 the imports amounted to 44,18,102 francs and the exports to 2,31,57,048 francs. At these three ports in 1916, 220 vessels of 342,797 tons entered and 213 of 339,686 tons cleared. Pondicherry is visited by French steamers sailing monthly between Colombo and Calcutta in connection with the Messageries Maritimes. The figures contained in this paragraph are the latest available and are corrected up to September 1917.

PONDICHERRY.

Pondicherry is the chief of the French Settlements in India and its capital is the headquarters of their Governor. It is situated on the Coromandel Coast, 105 miles from Madras by road and 122 by the Villupuram-Pondicherry branch of the South Indian Railway. The area of the Settlement is 115 square miles and its population in 1915 was 266,828. It consists of the four communes of Pondicherry. The Settlement was founded in 1674 under Francois Martin. In 1693 it was captured by the Dutch but was restored in 1699. It was besieged four times by the English. The first siege under Admiral Boscawen in 1748 was unsuccessful. The second, under Eyre Coote in 1761, resulted in the capture of the place, which was restored in 1765. It was again besieged and captured in 1778 by Sir Hector Munro, and the fortifications were demolished in 1779. The place was again restored in 1785 under the Treaty of Versailles of 1783. It was captured a fourth time by Colonel Braithwaite in 1793, and finally restored in 1816.

The Settlement comprises a number of isolated pieces of territory which are cut off from the main part and surrounded by the British District of South Arcot, except where they border on the sea. This fact occasions considerable difficulty in questions connected with crime, land customs and excise. The Collector of South Arcot is empowered to deal with ordinary correspondence with the French authorities on these and kindred matters, and in this capacity is styled the Special Agent. At Pondicherry itself is a British Consular Agent accredited to the French Government, who is usually an officer of the Indian Army. The town is compact, neat and clean, and is divided by a canal into two parts, the Ville blanche and the Ville noire. The Ville blanche has a European appearance, the streets being laid at right angles to one another; with trees along their margins reminding the visitor of continental boulevards, and the houses being constructed with courtyards and embellished with green venetians. All the cross streets lead down to the shore, where a wide promenade facing the sea is again different from anything of its kind in British India. In the middle is a screw-pile pier, which serves, when ships touch at the port, as a point for the landing of cargo, and on holidays as a general promenade for the population. There is no real harbour at Pondicherry; ships lie at a distance of about a mile from the shore, and communication with them is conducted by the usual *masula* boats of this coast. Facing the shore end of the pier is a statue of the great Dupleix, to whom the place and the French name owed so much.

CHANDERNAGAR.

Chandernagar is situated on the bank of the Hooghly, a short distance below Chinsura. Population (1915) 27,644. The town was permanently occupied by the French in 1688, though previously it had been temporarily occupied by them at a date given as 1672 or 1676. It did not, however, rise to any importance till the time of Dupleix. It changed hands between British and French various times during the Napoleonic wars and was finally restored to the French in 1816.

The former grandeur of Chandernagar has disappeared, and at present it is little more than a quiet suburban town with little external trade. The railway station on the East Indian Railway is just outside French territory 22 miles from Calcutta (Howrah). The chief administrative officer is the Administrator, who is subordinate to the Governor of the French Possessions. The peculiar situation of Chandernagar affords unusual facilities for the escape from British territory of thieves and for the operations of smugglers in opium and other excisable articles. Considerable trouble was experienced a few years ago by the escape of political refugees there. The chief public institution is the College Dupleix, formerly called St. Mary's Institution, founded in 1882 and under the direct control of the French Administrator.

KARIKAL.

Karikal lies on the Coromandel Coast between the Tanjore District of Madras and the Bay of Bengal. The Settlement is divided into three communes, containing 110 villages in all, and covering an area of 53 square miles. It is governed by an Administrator subordinate to the Governor at Pondicherry. The population has in recent years rapidly decreased. In 1883 it was 93,055; in 1891, 70,526; in 1901, 56,595; in 1912, 56,579; and in 1915, 56,867; but the density is still very high, being 1,068 persons per square mile. Kumbakonam is the only taluk in Tanjore District which has a higher density. Each of the three communes—namely, Karikal, La Grande Aldee, and Nedungadu—possesses a mayor and council. The members are all elected by universal suffrage, but in the municipality of Karikal half the number of seats are reserved for Europeans or their descendants. The country is very fertile, being irrigated by seven branches of the Cauvery, besides many smaller channels.

The capital of the settlement is situated on the north bank of the river Arasalar, about 1½ miles from its mouth. It has a brisk trade in rice with Ceylon, and to a less extent with the Straits Settlements. It has no commerce with France, and very little with other French colonies. The port is merely an open roadstead, provided with a light-house 142 feet high, the light in which has a range of from 8 to 10 miles. Indian labourers emigrate from Karikal to the French colonies in large numbers. In 1899 Karikal was connected with Peralem on the Tanjore District Board Railway. Karikal finally came into French possession on the settlement after 1815.

The Indian Frontiers.

In the earlier editions of The "Indian Year Book," in the articles on the Indian frontiers, it was pointed out that this question was for nearly three generations an issue between Great Britain and Russia. With one or two notable exceptions, British statesmen and British soldiers were able to view this issue solely in terms of Russia; they attempted to meet it by opposing Russia in every part of the world; by building up buffer states between the Indian Empire and Russia in Asia; and by maintaining inviolate the isolation of India on the landward side. A sketch of the frontier difficulties of the Indian Government since the British began to assume territorial power in India is really a reflection of the history of Europe. Our earliest dangers were either internal, or came from the sea. The sea menace was not of long duration. The defeat of the Portuguese and the Dutch left us with only one serious rival, the French, and when the sea power of France had been shattered by the foiling of the gallant Suffren, her schemes for dominion broken by the feeble support given to the great Duplex, and her hopes of advantage in India finally dispersed by the overthrow of Hyder Ali, then the foreign menace lapsed for well-nigh half a century. Meantime the process of internal consolidation advanced so rapidly that when renewed pressure came from the North, there was no rival to the British in India, and only one considerable military power, the Sikhs under Ranjit Singh. Such were the conditions when fears of Russian intrigues in Afghanistan, and the belief that the Amir Dost Mahomed was lending a ready ear to them, induced the disastrous attempts to set the exiled Shah Shuja on the throne of Afghanistan, and inaugurated the most deplorable episode in Indian frontier policy, the war of 1838. That was the first stage in the long duel between Great Britain and Russia for influence in Central Asia and on the confines of India. There are no pages in British history which are so unpleasant to turn. Our policy may be summed up in a sentence—impotent opposition to the Russian advance in Central Asia. Russian policy was much more simple. In part her advance sprang from the inevitable clash of a higher civilisation with a lower; in part, no doubt, her officers were not loth to pay off, by setting us in a ferment in Central Asia, scores made on the heights of Balaclava and at the Berlin Conference. It was not until war was avoided by a hair's breadth that relations began to improve. The Russo-Afghan affray at Penjdeh in 1885 brought both countries to a realisation of what they were nearly fighting over. After that there was a slow improvement. The Russo-Afghan boundaries were delimited. The frontiers on the Pamirs were settled. There were alarums and excursions during the Russo-Japanese war, when erroneous accounts were circulated of great Russian concentrations in Central Asia, and again, when intrigues with Tibet forced Lord Curzon to send the Younghusband Expedition to Lhasa. But the ground was gradually prepared for the Anglo-Russian Agreement, and since after conclusion of that instrument the Frontier question, as it used to be understood, has faded into the background; until it was revived by German aggression.

The Land Route.

We have said that the Indian frontier question was a reflection of the general European situation. Whilst the gaze of the British people was concentrated on Russia, which with her huge Asiatic possessions could never have seriously considered the conquest of India, they failed to see the real menace which sprang from the eastern ambitions of Germany. It is one of the ironies of the situation that a British Ambassador at Constantinople, who is generally described as able, actually encouraged the advent of Germany into Asia Minor as a counterpoise to Russia and thus laid the train for the present war. For it is not open to doubt that the ultimatum to Serbia was designed to reduce that State to a condition of servitude to Austria, and thereby to pave the way for an advance to Salonika, the conquest of Constantinople, and an advance through Asia Minor to the Persian Gulf. All these ambitions were centered in the revival of the **Land Route to the East.** We study our history so carelessly that the real history of the land route to the East survives in little more than a shadowy knowledge of the travels of Marco Polo. But for centuries the land route was one of the great highways of the world. When Alexander set out on his career of conquest twenty-two centuries ago, there was an easy high road from Mesopotamia to Seistan and not a very difficult one to Mekran; and so it came about that migratory movements, either compulsory or voluntary, continued through centuries, ever extending their scope until checked by the deserts of the Indian frontier, the highlands of the Pamirs or Tibet, or the cold wastes of Siberia. The **closing of this road** was due to the eruption of the Afghan, the Turk and the Mongol; and in particular to the final downfall of the Empire of the Kaliphs before the destroying hordes of Chengiz Khan and Tammerlane. The land route was closed, and the perfection of sea communications prevented the existence of any strong economic need for its revival. The improvement of the caravan route between Nushki and Seistan, for Meshed, represents the only improved land communication of the British Empire for all these years. The abortive proposal for a railway along the Euphrates Valley meant the killing of the one project which might have prevented the later complications.

Advent of Germany.

But if the British people failed to understand the teachings of history, and were lulled into the complacent belief that the land route could be indefinitely closed and all traffic with the East confined to the sea, whereon they were masters, the German Government refused to subscribe to this comfortable delusion. The story of the revival of the land route, and with it a whole **chain of German ambitions**

is little known, and was for long preserved in fragments; it has however been told with authority and clearness in the 29th number of "The Times" History of the War, to which the reader in search of more detailed information is referred. We propose to summarise that story here, although parts of it more properly belong to the detailed frontier sections which follow:—

The first visit of the Emperor William to Constantinople in 1889 saw the dawn of a **Pan-Germanic Scheme** which was known in Berlin as the B.B.B.—Berlin-Byzantium-Baghdad. After the war began, a Professor, lecturing at Berlin, said that Germany's aims might be summed up in four catchwords—North Sea, Constantinople, Baghdad, Indian Ocean. Another favourite expression, attributed to the Emperor, was a Germanic wedge reaching from Hamburg to the Persian Gulf. The steps towards this goal were very deliberately taken. The first measure was to acquire supreme **influence at Constantinople.** This was done by assiduously courting Abdul Hamed, and discretely maintaining his influence against the rest of Europe. At a time when Abdul Hamed's hands were red with the blood of the Armenians murdered by his orders in his capital and his provinces, the Kaiser professed himself his warm friend, and steadfastly refused to support any measures to save the lives of the Armenians or to check misgovernment in Macedonia. The reward came in valuable concessions. The Deutsche Bank group, which had acquired control of the railways of European Turkey, extended its influence to Asia Minor. After the second visit of the Kaiser to Constantinople in 1898, there came the Baghdad Railway concession (q. v.) by which the Sultan granted a concession for the continuation of the Anatolian railways (a German enterprise) to Baghdad and the Persian Gulf to a German syndicate. This was styled The Imperial Ottoman Baghdad Railway Company, and the concession was signed on behalf of Germany by Herr von Siemens, of the Deutsche Bank. By a further and more definite concession, granted in 1903, to Herr von Gwinner, of the Deutsche Bank, Turkey guaranteed interest on the cost of the line at the rate of £700 per annum per kilometre. This was sufficient to ensure the promoters a handsome profit on the enterprise, regardless of the traffic conditions. There is a good deal of misconstruction with regard to the line which the Germans are building under this concession. All sorts of estimates have been made on the assumption that the line will be suited only for slow trains, and the conclusion has been drawn that the sea route will be able to complete with it for passenger traffic. The fact is that the later sections of the line are being built to a standard which in India is applied to **express traffic,** and which even in the Indian hot weather permits trains to be run at fifty miles an hour.

Persian Gulf Port.

An essential part of this scheme was a port to serve as a terminus for the railway in the Persian Gulf. The steps taken to this end are very characteristic of Teutonic commercial diplomacy. **The first German firm** to appear in the Gulf was that of Wonckhaus & Co., of Hamburg, which in 1896 began to deal in shells and mother of pearl at Lingah. The next year the Germans established a vice-consulate at Bushire; there were then six German subjects in the Persian Gulf. In 1899, after the signing of the definitive Baghdad Railway concession, this activity increased. The German cruiser Arcona visited various parts of the Gulf. A party of German "scientists" appeared at Bunder Abbas. In 1900 Herr Stemrich, German Consul-General at Constantinople, travelled overland to the Gulf at the head of a mission, which included the German Military Attache at Constantinople. He visited Sheikh Mubarak of Koweit and tried to buy a site at Ras Kathama, at the head of the Bay, as a terminus for the railway. He was refused, for the Sheikh had entered into an agreement with Great Britain not to lease or dispose of any part of his possessions to a foreign power without our permission. Baffled in direct negotiations, the Germans, who were now all-powerful at Constantinople, stirred up the Turks to attack Sheikh Mubarak. In 1901 a Turkish corvette, packed with troops, sailed into Koweit harbour and the commander announced that he proposed to take possession of the town. A British cruiser intervened and the Turks sailed away. Later a high Turkish official, with a menacing letter to the Sheikh, entered the harbour and retired for the same reason. Two other attempts were made the first was to stir up Ibn Rashid, of Central Arabia, to attack Koweit, the second to incite Mubarak's nephews to the same end; with the failure of these efforts the direct German attacks on Koweit came to a conclusion. They once again had recourse to the Turks. They seem to have discovered an alternative terminus to the railway in at Khor Abdullah, north of Koweit, and sent troops down to establish posts there, which remained until the eve of the war.

Meantime **commercial penetration** was energetic. The firm of Wonckhaus was exceedingly active and expanded all over the Gulf, run on lines which could not have been commercially profitable. Various attempts were made to acquire a *pied a terre,* and one almost succeeded. The Sheikh of Shargah granted a concession to three Arabs to work the red oxide deposits on the island of Abu Musa and the Arabs transferred it to the Wonckhaus firm. The Sheikh protested and with the assistance of the British the intruders were removed; the German Press protested, but the Government confined themselves to a formal caveat. Another German agent sought to obtain an irrigation concession in the Karun. The Hamburg-America Company entered the Gulf trade with a great flourish of trumpets and a display calculated to impress the Arabs. This was the position when three years before the war a serious attempt was made to **arrive at an agreement** between Great Britain, Germany and Turkey which would regularise the position. It provided that the terminus of the Baghdad Railway was to be at the true commercial terminus, Basra. No extension beyond Basra was to be made without the sanction of Great Britain. Turkey agreed to

abandon her pretention to suzerainty over the Bahrein Islands, Maskat and the territory of the Trucial Chiefs, and to evacuate the Peninsula of El Katr, near Bahrein. Great Britain agreed to recognise the suzerainty of Turkey over Koweit, on the condition that Turkey did not interfere in the internal affairs of the Sheikh and recognised the British conventions with Mubarak. This agreement, and a complementary agreement with Germany, were understood to be ready for signature when the war broke out.

THE EXPEDITION TO MESOPOTAMIA.

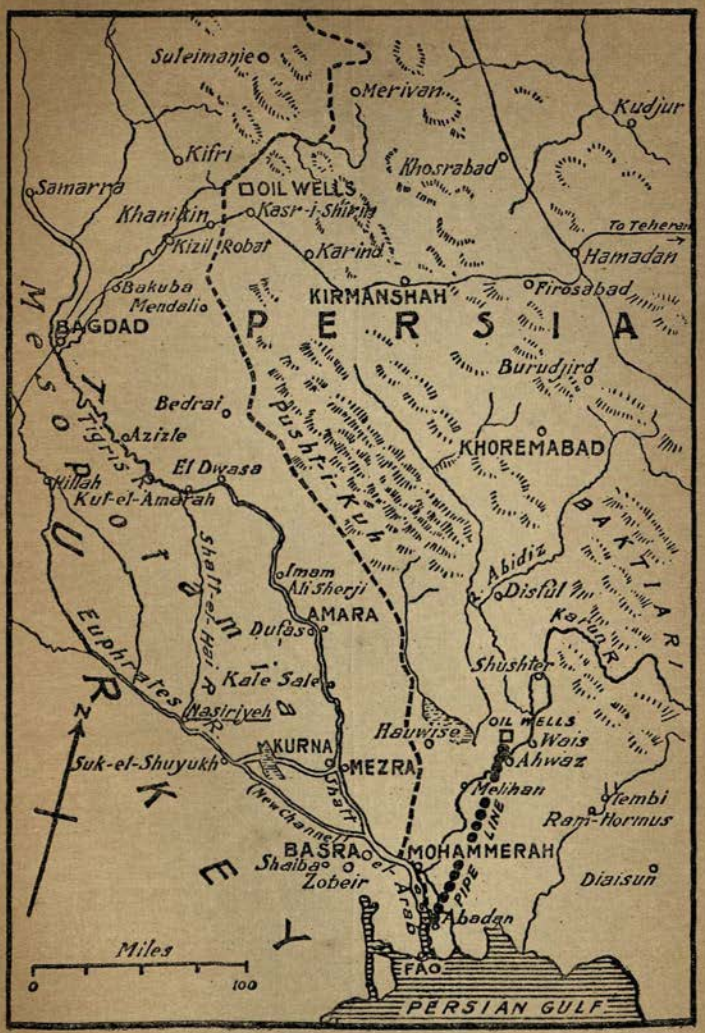
At this point we may conveniently summarise the progress of the expedition to Baghdad, although a consideration of the position of Basra and Baghdad in the polity of the Gulf properly belongs to a later section. For some time before the actual outbreak of hostilities on October 29th, 1914, the British Government had known that the participation of Turkey in the war on the side of Germany was inevitable; they were determined not to give the Turks any excuse for hostilities, but at the same time they were prepared. A Poona Brigade, under Brigadier-General Delamain, was sent to the Island of Bahrein, to be ready for all emergencies. Consequently when the Turks commenced hostilities it was in a position to act with vigour. The first British troops reached the bar at the mouth of the Shatt-el-Arab on November 27th and took Fao, an old-fashioned Turkish fort and cable station. They then proceeded thirty miles up the river and landed at Saniyeh in order to protect the works of the Anglo-Persian Oil Company, which is working a valuable petroleum concession in the valley of the Karun (q.v.) On November 13th, Lieutenant-General Sir Arthur Barrett, who had been placed in command of the operations, arrived with strong reinforcements, and on November 15th drove the Turks from part of the village of Sahain. On November 17th, the whole force moved north, found Sahain evacuated, got in touch with the Turks at Sahail, near the river, and after a sharp action, in which the Dorsets especially distinguished themselves, drove them out with considerable loss. On the morning of the 24th came the unexpected intelligence that the **Turks had evacuated Basra** and that the Arabs were looting the town; Sir Arthur Barrett pushed forward with all speed by land and river, and on November 23rd the British troops formally entered the city. The notables were assembled, a proclamation stating the reasons for the occupation and the friendliness of the British Government was read, and salutes were fired.

Importance of Basra.—The importance of Basra was for long little appreciated by the British people, who had their gaze directed on the possibilities of Koweit as a terminus for the Baghdad railway and to the traditional glories of Baghdad itself. But Basra is bound to become one of the great ports of the world. The main portion of the city lies up the contracted Asshar Creek, a quarter with narrow, unpaved streets, two miles from the river. The population is estimated at 60,000, but there are probably many more people in the outer suburbs. The population is very mixed including many Jews and Armenians. The Turks are few in number and consist mainly of the officials and the garrison. The merit of the city lies in its geographical position. It lies just below the confluence of the Tigris with the Euphrates and therefore receives the traffic of the two rivers. It is only sixty miles from the sea, and the river channel is so deep that it could easily be made available for steamers of the largest tonnage that can pass through the Suez Canal. The only obstacle to its rapid development is the bar at the mouth of the Shatt-el-Arab, and as this is of the softest mud it could easily be dredged. Basra must of necessity be the port of the Middle East; given decent government in Mesopotamia and the dredging of the bar and it will become a powerful commercial factor in Asia.

The Garden of Eden.—After their retirement from Basra the Turks established themselves at Kurna, forty-nine miles northward, where the partially-blocked channel of the Euphrates joins the Tigris; this is often said to be the site of the Garden of Eden. It was determined to expel them. An expedition for this purpose left Basra on December 3rd, and after preliminary successes found the Turks in such force and so strongly entrenched that reinforcements were needed. These arrived on December 6th, the river was boldly crossed above Kurna, and then at midnight on the 8th a small steamer came down the river conveying an offer from the late Governor of Basra, Subhi Bey, to surrender. An unconditional surrender was demanded and received; and at one o'clock p.m. on the 9th the Turks laid down their arms. In January a force of Turks with six guns established themselves on the Ratta Canal, about seven miles north of the Mezera Camp near Kurna, and were shelled out; more serious fighting was to follow.

Fight for Shaiba.—The object of the Turks was now to recapture Basra. They had no large force nearer than Baghdad, which lies on the Tigris 500 miles (by river) north-west of Basra. The direct route to Basra down the Tigris was, however, blocked by the British occupation of Kurna. The Turkish forces, therefore, came down that river as far as Kut-al-Amara (220 miles from Baghdad) and thence along the Shatt-al-Hai, the canal which connects the Tigris with the Euphrates, to Nasariyeh on the latter river. From this point about 115 miles north-west of Basra, they marched across the desert, 15,000 strong. At Shaiba, 10 miles west of Basra, they encountered a British force much inferior in numbers. Here on April 12-14 very severe fighting occurred—far more severe than any previously experienced in Mesopotamia. For some hours on the last day the issue hung in the balance, and at one time our retirement seemed inevitable. In the end we were completely successful. The Turks had at least 5,000 casualties; ours were about 1,300.

Capture of Amara.—After our capture of Kurna, on December 9, the Turks occupied a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BAKTIARI
Shatt-el-Hai R.
Imam Ali Sherji
R. Abidiz
Disful
AMARA
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Karun R.
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Kale Sale
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Shatt el Arab
(New Channel)
Melihan
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PERSIAN GULF

number of low hills to the north, from which they fitfully bombarded the town. It was necessary to evict the enemy from their positions before we could advance north of Kurna. The problem was a formidable one, because the whole country for many miles to the north was under several feet of water, except a few isolated sandbanks and hillocks such as those occupied by the enemy. The country is thus flooded every year on the melting of the snows in the far north round the head-streams of the Tigris. The ground remains under waters for six months or more, and the only thing to be done was to attack the enemy's positions in boats. The local boat, called a bellum, has a length of about 35 ft. and a beam of 2½ ft., and is propelled by poles like a punt, or, in deep water, by paddles. The whole of the brigade stationed in Kurna was engaged for a good many weeks in learning to navigate these boats. At the same time numerous field guns were mounted on various other boats and rafts to enable them to approach within range of the Turkish positions. At dawn on May 31 the whole brigade moved out of Kurna for the attack. Several hundred boats were employed, each holding 10 men. Machine and mountain guns were mounted on pairs of boats yoked together. The spectacle of a brigade of infantry thus advancing across flooded country was perhaps unique in the history of the British and Indian Armies. Before the advance the Turkish positions were bombarded from the Tigris by three sloops of the Royal Navy, by the Royal Indian Marine steamer Lawrence, and by the field guns already mentioned. The low hills attacked were occupied by Turks and Kurds, with about half a dozen Germans. Most of the flooded area to be crossed was thickly covered with reeds, through which the progress of our boats was very slow. The enemy had, therefore, a magnificent target. Fortunately they had no machine guns, while their rifle fire was not good. They had six field guns, but their ammunition was inferior and their gunnery poor.

On Norfolk Hill, three miles north of Kurna and the first position to be attacked, the enemy put up a fairly good fight, and the hill was not captured without a good deal of bayonet work, our men leaving their boats and rushing the Turkish trenches. From all their other positions, six in number, the enemy fled as a result of our bombardment, or where their retreat was cut off surrendered without resistance. They had previously sunk several large barges across the Tigris, a few miles north of Kurna, in order to prevent our steam vessels from cutting off their retreat. But the work was not thoroughly done, and by the evening of June 1, the second day of the operations, our steamers were past the obstruction and in pursuit of the fleeing enemy. On June 3 we occupied Amara 87 miles above Kurna, without opposition. This town has a population of 10,000, and is the most important place on the Tigris between Baghdad (370 miles up stream) and Basra (130 miles down stream).

By the evening we had captured 80 officers and 2,000 men, seven guns, several river steamers, and other craft, and a large amount of ammunition. Eighty corpses were found on Norfolk Hill and a few of the prisoners had been wounded there. Our own casualties during these four days were one British officer killed and 20 other casualties. The prisoners taken included three German non-commissioned officers. Five other Germans, believed to be officers, escaped into the marshes, but two of them were killed within a few hours by Bedouin Arabs.

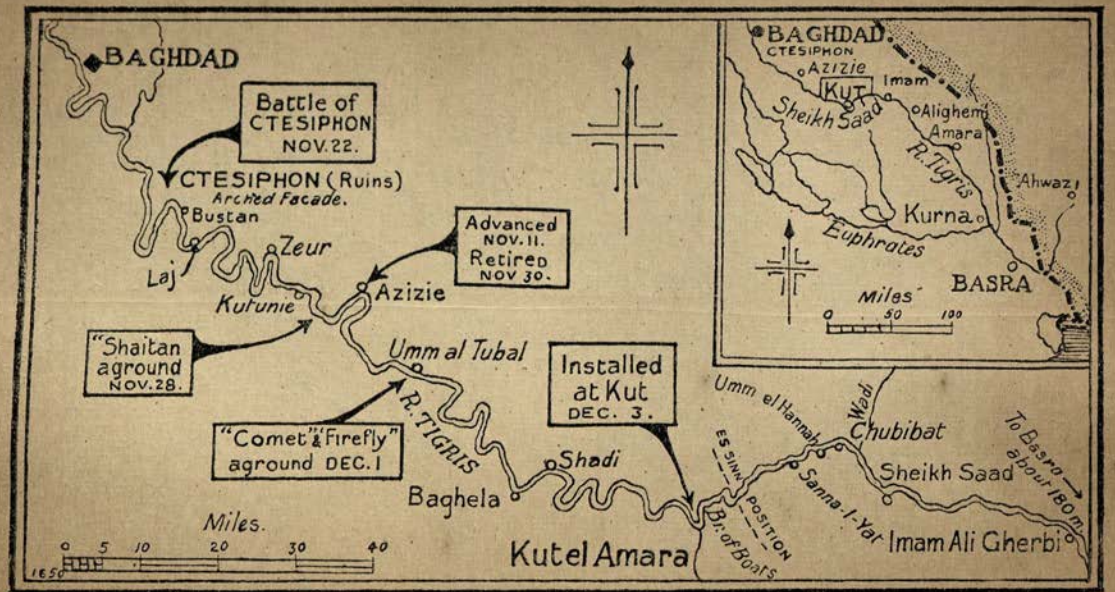
Nasriyeh.—The capture of Amara was of more importance than the expulsion of the Turks from one centre. If the map is studied it will be seen that after their retirement from Basra the Turks had three lines of advance—from Amara they could move against the valley of the Karun or Basra at will; from Kut-al-Amara, further north, they were in a position to come down the Shatt-el-Hai to Nasriyeh and then turn eastwards towards Basra, as they did when they attacked at Shaiba. Now the advance against Amara was accompanied by sweeping operations up the Karun, and it is believed that the Turks who retired from before General Gorringe's sweeping columns, finding themselves cut off from their base at Amara, suffered severely from the Marsh Arabs, who systematically murder the wounded and the stragglers at both sides. But from their base at Kut-al-Amara the Turks still had a double line of advance—down the Shatt-el-Hai and down the Tigris. The next operations were designed to force them back along the single line of communications *via* the Tigris. The first series aimed at the **capture of Nasriyeh.** The operations under General Gorringe which culminated towards the end of July in the brilliant victory for British arms just outside Nasariyeh and in the capture of Nasariyeh itself occupied almost exactly a month. As in all operations in Mesopotamia these were conducted as much by water as by land. Throughout the advance the heat was intense and there were few days that the temperature did not reach 115 degrees in the shade. By day the heat in the iron vessels and the glare from the water were almost intolerable. By night innumerable mosquitos gave little rest to the wearied troops.

The Turks had constructed a dam on the Hakeika channel a short distance outside the Hammar lake. Although the existence of this dam was known it proved a much more difficult obstacle than had been at first expected. The Turks chose the site carefully and expended a vast amount of labour on its construction, for it took the British a week of hard work to pass their by no means numerous ships through it. All this had given time to the enemy to bring up reinforcements and the British were now faced by a force greatly superior in numbers to their own. The enemy occupied an entrenched position on both banks of the channel at the point where it leaves the Euphrates. On the 5th, the British attacked the Turkish position on both sides of the channel. Infantry moved along either bank assisted by the fire of gun-boats which moved up the channel behind them sweeping for mines. A fleet of bellums (small flat-bottomed boats) and the 30th Mountain Battery on rafts moved up the lake with the infantry attack, protecting their flank from a horde of Arabs who threatened an attack from the other side of the lake. The

enemy's trenches were well constructed and were held by a mixed force of Turks and Arabs, but the attack did not falter, and so resolutely did the British push on that they not only occupied the trenches, but, crossing the Euphrates in bellums, they attacked the Turkish Artillery position and captured a complete battery.

The Turks retired up the river and on the next day the British pushed on, reaching Asani on the evening of the 6th. On the 8th it became evident that heavy reinforcements had reached the enemy. General Gorringe realised that he must wait until he was in a stronger position to attack, and set work to strengthen his own defences. The last of the reinforcements reached General Gorringe on the 22nd and he made up his mind to attack the enemy on the 24th. It was 6-30 in the evening before they were able to capture the last position at the point of the bayonet, the Turks refusing either to surrender or leave the trenches. That night the naval boats pushed on to Nasriyeh encountering a good deal of opposition as they entered the town. The firing gradually died down, however, and by the time the troops were able to march in, all resistance was at an end. All the artillery which the Turks had at Nasriyeh, 17 guns including one large howitzer, fell into the hands of the British as well as about a thousand prisoners and large stores of rifles and ammunition.

Kut-al-Amara.—Any detailed account of the minor operations which led up to the battle on the 27th and 28th September would fill many columns, for the British force had left the lower reaches of the river and was operating 300 miles away from its base, with lines of communication stretching down the winding uncertain course of the Tigris. The Turks had taken up a position on both banks astride the river with the intention of preventing the British forces from reaching Kut-al-Amara. The line of defence lay almost north and south, for here the river flows approximately from West to East. A few miles above the Turkish position the river bears again more to the North. A boat bridge crosses the Tigris three miles below Kut-al-Amara. The defences constructed by the Turks stretched for about six miles on either side of the river. An old dry canal bed branches off at right angles to the right bank of the river, and its artificial banks twenty feet high were the only outstanding features in the whole monotonous landscape. A bridge of boats had been constructed at the place of concentration and this bridge was an important factor in General Townshend's plans for attack. Broadly, this plan was to make a demonstration against the enemy's right, that is on the right bank of the river, to give him the impression that this flank was to be the object of the main attack, and then, by means of the bridge to cross to the left bank of the river with the majority of his force and attack the Turkish left. Dawn on the 27th found the whole of the force in position. An immediate start was made, and in a short time the whole of the line was engaged by the enemy's long range fire. The British troops on the right bank developed heavy artillery and infantry fire driving in the advanced Turkish troops, in the hope that their right would be reinforced and their left weakened. As soon as light appeared, General Delamain developed his force for attack. The greater part were directed to a flank attack on the enemy's extreme left, while the remainder advanced to a frontal attack against the left portion of the section of defence between the two marshes. General Fry at the same time developed all his strength in the hope of being able to close with the Turks in front of him. Of General Delamain's force, the flank attack soon found that, owing to the extent of the marsh, the route which they would have to take was much more circuitous than had been expected. Meanwhile the frontal attack had become so seriously engaged that General Delamain decided to push home an attack with the troops at his disposal on the extreme left of the Turkish defences in front of him. The infantry rushed forward and captured the first line of trenches at the point of the bayonet. Here their work was by no means finished, for a devastating fire swept them from the rest of this section of the defence which was still in the hands of the enemy. A wheel to the left in the maze of trenches brought them face to face with very strong bodies of Turks and after a gallant attempt to force their way forward they were compelled to await the leading troops of the flanking force which were now coming round the marsh. Junction with these was effected at about half past ten in the morning. Coming in on the right they swept the whole of the Turkish defences between the two marshes from left to right only completing their task at two o'clock in the afternoon. They were failing for want of water, but by marching round the back of the enemy's position between the river and the marsh, General Delamain hoped to reach the river at one of its bends before he was called upon to engage the enemy again. In this hope the column advanced and at about 5 o'clock in the afternoon had reached a point behind the Turkish position about a mile and a half from the river. Here they suddenly came under a very violent artillery fire from the further bank of the river, and General Delamain realising that they could not reach water by that route, determined to attack the Turkish position from the rear, and changing the direction of his column marched straight towards the trenches. This was about half past five and the light was beginning to fail. Hardly had the change of direction been carried out when the British column realised that they were marching parallel to a large force of the enemy's infantry and guns at a distance of about a mile. There was no time for preparation or orders for attack, nor indeed was there any need for them. An order to "right turn" brought the British infantry and guns face to face with the Turkish force. Without firing a shot the troops turned and advanced on the enemy. The Turks had realised the situation at the same moment, but fortune favoured them, for the road along which they were passing lay along the edge of a disused sunken watercut, and they quickly slipped into this. Though suffering heavy losses the British pushed straight on, only pausing to return the



Illustrating the Battle of Ctesiphon and the retirement to Kut-al-Amara.

fire before they closed with the enemy. At 200 yards the order was given to fix bayonets and as the whole line surged forward to the final assault the Turks broke from their shelter and fled. This was the force, seven regiments with guns, with which Nur-ud-Din was reinforcing his hard pressed left. The Turks evacuated the whole position during the night, leaving many guns and much ammunition. The Cavalry occupied Kut-al-Amara on the morning of the 29th and the pursuing force reached it by river on the morning of the 30th when Kut-al-Amara was formally occupied by the British.

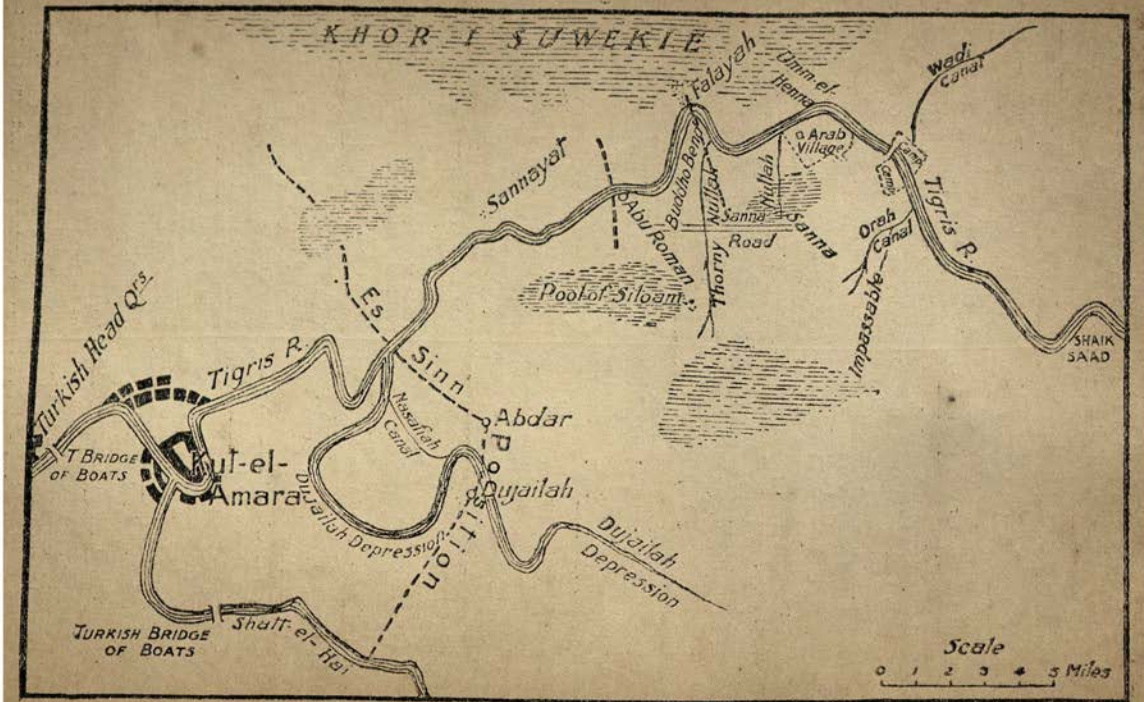
The Advance Towards Baghdad.

After the victory of Kut-al-Amara General Townshend pursued the routed Turks with the utmost vigour; but the transport difficulties soon intervened and the pursuit was arrested at Aziziah, thirty miles east of Ctesiphon. Here the force halted for the time; whilst it was here the momentous decision to attempt to take Baghdad was reached. For six weeks reinforcements and stores were brought up to Aziziah and Kut preparatory to the further advance, a task which was made the more onerous by the difficulties of navigation during the season of low water. On November 19th the advance was continued, moving by both banks of the river, and the enemy slowly retired to his prepared position at Ctesiphon. The Turkish lines lay astride the Tigris, covering the approach to Baghdad, which was situated some eighteen miles to the north-west. They consisted of an extensive system of entrenchments forming two main positions. On the right bank the front position extended from the river for about three miles in a S. W. direction, the second line trenches lying some five miles up-stream. On the left bank a continuous line of entrenchments and redoubts stretched from the river for a distance of six miles north-east; the left flank terminating in a large redoubt. On this bank the second line was about two miles behind the front position and parallel to it for about three miles from the Tigris, thence it turned northwards to the Diala river. The enemy's strength was estimated at thirteen thousand regular troops, with thirty-eight guns in the Ctesiphon position and it was reported that reinforcements were arriving; it was considered important to attack before these fresh troops were brought into action. Our own forces were about 12,000 strong.

The Battle of Ctesiphon.—General Townshend's tactics were similar to those employed at Kut-al-Amara—an attack in the centre accompanied by a wide flanking movement designed to turn the enemy's left. After a night march from Laji on the night of the 21st—22nd November the attack was delivered in the centre and against the north-east flank. A severe action lasting throughout the day resulted in the capture of the whole first position and of thirteen hundred prisoners. Our troops pressed on and established themselves in the second line, where they captured eight guns. They were at once subjected to heavy counter attacks by fresh troops; the guns changed hands several times; and they had finally to be abandoned, as it was found that owing to heavy losses it was necessary to withdraw the troops to the first positions. On the 23rd the troops were reorganised in the position which they had captured and the heavy casualties were collected. Owing to the heavy losses in killed and wounded, especially amongst the officers—we had lost four thousand five hundred, more than a third of the force—it was impossible to renew the offensive, and the Turks, heavily reinforced, attacked the British line on November 23rd-24th, but were repulsed with considerable loss. It was therefore decided to retire to Kut-al-Amara, the decision being quickened by evidence that the Turks were pushing down the left bank of the river and also inland in order to cut off the force. The principal incidents of the retirement were a brisk cavalry engagement east of Kutunie on the 29th, when the enemy's advanced mounted troops were driven back. On the 30th the main force had to halt at Umm-al-Tubal, as the river craft were in difficulties in the shoal water. It was attacked in force at daylight on December 1st when the Turks lost heavily, and taking advantage of a counter attack by the cavalry brigade against a force which was attempting to envelope his right flank, General Townshend broke off the action and made good his retirement to Kut-al-Amara, which was reached on the morning of December 3rd.

First Relief Measures.—Within a month the steps to relieve the Kut garrison were taken. On January 4th General Aylmer advanced from Ali-al-Gharbi towards Sheik Saad, the southern point held by the Turks. The Turks were entrenched astride the Tigris, three and a half miles east of Sheikh Saad and an attempt to turn their right did not succeed, owing to the presence of hostile cavalry and Arabs in force. General Aylmer arrived on the 7th with the remainder of his force, and ordered a general attack on both banks of the river. Very heavy fighting throughout the day followed. By evening the enemy's entrenchments on the right bank of the river had been taken, with six hundred prisoners and two guns, but the enemy held fast on the left bank. On the 9th the Turks were forced to abandon their remaining positions and retired up-stream, followed by our troops. The heavy rain, converting the alluvial soil into liquid mud, made effective pursuit impossible and the Turks took up a fresh position on the Wadi river. General Aylmer having concentrated his whole force attacked the Wadi positions on both banks on the 13th. After a hard fight the Turks were driven out on the 14th, and retired five miles, where they entrenched in the Umm-al-Hanna defile, with their left resting on the Suwalkieh marsh and their right on the river. At this stage General Nixon returned to India and General Sir Percy Lake took supreme command. Experience soon showed that these actions represented from the Turkish standpoint nothing more than strong rearguard actions and that their main positions had not yet been reached.

Three Phases.—The subsequent operations for the relief of Kut-al-Amara, with the reasons for their failure, were recorded in a despatch issued by Sir Percy Lake and published in a Gazette Extraordinary on October 13th, 1916. The operations covered in this despatch included three phases.



Illustrating the operations for the relief of Kut-al-Amara.

1st Phase, 19th to 23rd January, an unsuccessful attempt to force the Hannah defile, Commander: Lieutenant-General Sir F. Aylmer; 2nd Phase, 24th January to 10th March, a period of rest and reorganisation followed by the unsuccessful attempt to outflank the enemy's right in the vicinity of the Dujailah redoubt. Commander: Lieutenant-General Sir F. Aylmer; 3rd Phase, 11th March to 30th April, a brief period of preparation followed by the attack and capture of the Hannah and Falahiyah positions, a failure to force the Sann-al-yat position and the fall of Kut. Commander: Lieutenant-General Sir G. F. Gorringe.

The general position on the Tigris front on January 19th, 1916, was that General Aylmer's force was encamped on the left bank of the river above the Wadi river, where the advanced troops were in touch with the Turks on the Wadi Umm-al-Hannah position. Unfortunately the first phase of the operations was dominated by a fatal misconception. It was believed that General Townshend was short of provisions and was anxious about his ammunition supply. There was also the question of forestalling the reinforcements which the Turks were certain to bring down the river. Although therefore there was urgent need to reorganise the force, which had for the most part been hastily transported from Egypt, and the river transport was grievously defective, it was felt that if the relief of Kut was to be effected, it must be attempted at once. It was not until the first phase of the fighting was over that news was received on January 25th that General Townshend was provisioned for eighty-four days. At this time the number of river steamers available was practically the same as when in June of 1915 the small Tigris force began its first advance up the river.

Rush Tactics Fail.—After the battle of the Wadi river General Aylmer's troops followed the retreating Turks to the Umm-al-Hannah position and entrenched themselves at the mouth of the defile so as to prevent them from taking the offensive. The weather at this time was extraordinarily unfavourable, for the rains caused the river to overflow, converting the terrain into a bog, the bridge across the Wadi was washed away several times, and the task of bridging the Tigris, here four hundred yards wide, was one of great difficulty. Guns and troops were however ferried across the river so as to co-operate from the right bank by enfilade fire with the main attack, which was delivered on the left. January 20th was devoted to a bombardment of the enemy position and during the night the infantry advanced to within two hundred yards of the Turkish lines. On the morning of the 21st, under cover of an intensive bombardment, the troops moved out to the attack. On the right the troops, having got to within a hundred yards of the Turkish position, were unable to advance further. The left columns consisting of the Black Watch, 6th Jats and 41st Dogras penetrated the front line with a rush, capturing trenches which they held for about an hour and a half. Supports were sent forward, but losing direction and coming under a heavy fire failed to reach them; left unsupported and being subject to heavy counter attacks, these troops were forced to retire. Rain now fell, converting the terrian into a sea of mud; severe losses were sustained through the enemy's fire; and the assault failed. At dark the troops were withdrawn to the main trenches, thirteen hundred yards from those of the enemy, and a six hours armistice was arranged to bury the dead and remove the wounded. This closed the first phase of the operations. As it was now known that General Townshend was provisioned for eighty-four days the need for precipitate action was no longer felt.

Success Jettisoned.—The whole force was reorganised. The hurried improvisation of temporary brigades and divisions, with which the force had been obliged to commence its advance from Al-i-Gharbi was showing its inherent weakness.

Divisions and brigades, the units of which knew each other and had served together in France, had perforce been broken up to meet the difficulties of transport on a long sea voyage. There had been no time on arrival in Mesopotamia to await belated units. In many cases field ambulances had arrived after the combatant units, and brigade and divisional formations had been made up with such units as were first available. This was a severe handicap to the troops and steps were now taken to reconstitute formations as far as possible in their original condition. Throughout the month of February preparations were made for resuming the offensive. Reinforcements were pushed up from the base by steamer and route march, and reorganisation and training were carried on at the front.

The position when the work of reorganisation was completed and conditions were ripe for a fresh advance were briefly these:—On the left bank, the enemy, having been reinforced, still held the Hannah position in force, further in rear were other defensive lines at Falahiyah, Sanna-al-Yat, Nakhailat and along the northern part of the Es-Sinn position. All, except the last named, had been constructed since the battle of Hannah on the 21st January. They were all protected on both flanks by the Tigris and the Suwaikich marsh respectively. On the right bank the Es-Sinn position constituted the Turkish main line of defence, with an advanced position near Bit-ai-Essa. The right flank of the Es-Sinn position rested on the Dujailah redoubt, which lay some 5 miles south of the river and 14 miles south-west of the British line on the right bank.

The flood season, which usually sets in about the middle of March, was approaching, and General Aylmer decided, without waiting for reinforcements, to make his great attempt. On this occasion the main attack was delivered on the right bank of the river, in an attempt to turn the Turkish right, which rested on the Dujailah redoubt. Unfortunately the weather, which handicapped the force throughout these operations, obstructed it again, and an interruption caused by rain at the beginning of the month enabled the Turks to close their right by pushing a line of trenches from the Dujailah redoubt to the Shatt-el-Hai.

On the afternoon of March 7th, General Aylmer assembled his subordinate commanders and gave his final instruction, laying particular stress on the fact that the operation was design-

ed to effect a surprise and that to prevent the enemy forestalling us it was essential that the first phase of the operation, *i.e.*, the capture of the Dujailah redoubt, should be pushed through with the utmost vigour. His dispositions were briefly as follows:—The greater part of a division under General Younghusband, assisted by naval gunboats, confronted the enemy on the left bank. The remaining troops were formed into two columns under General Kemball and General Keary respectively a reserve of infantry and a cavalry brigade being held at the corps commander's own disposal. General Kemball's columns, covered on the outer flank by the cavalry brigade, was to make a turning movement to attack the Dujailah redoubt from the south, supported by the remainder of the force operating from a position to the east of the redoubt.

This night march was one of the tactical triumphs of the campaign. Despite the immense difficulties of such an operation, General Keary's column was in position at daybreak ready to support General Kemball's attack. General Kemball's column did not reach the point selected for its deployment in the Dujailah depression until an hour later—a most prejudicial delay.

In spite of their late arrival the presence of so large a force seems to have been quite unexpected by the Turks as the Dujailah redoubt was apparently lightly held. When our column reached their allotted positions prompt and energetic action would probably have forestalled the enemy's reinforcements, but time was lost by waiting for the guns to register and to carry out reconnaissances and when, nearly three hours later, General Kemball's troops advanced to the attack they were strongly opposed by the enemy from trenches cleverly concealed in the brushwood and were unable to take further ground for some time, though assisted by General Keary's attack upon the redoubt from the east. The southern attack was now reinforced and by 1 p.m., had pushed forward to within 500 yards of the redoubt, but concealed trenches again stopped further progress and the Turks made several counter-attacks with reinforcements which had now arrived from the direction of Magasis. It was about this time that the corps commander received from his engineer officers the unwelcome news that the water supply, contained in rain water pools in the Dujailah depression, upon which he had reckoned, was insufficient and could not be increased by digging. It was clear therefore that unless the Dujailah redoubt could be carried that day the scarcity of water would of itself compel our troops to fall back. Preparations were accordingly made for a further assault on the redoubt and at 5-15 p.m. attacks were launched from the south and east. Under cover of a heavy bombardment the 9th and 28th infantry brigades got within 200 yards of the southern face, where they were held up by heavy fire, although reinforced. Meanwhile the 8th infantry brigade, supported by the 37th, had assaulted from the east. The two leading battalions of the former, the Manchesters and 59th Rifles and some of the 37th infantry brigade, succeeded in gaining a foot-hold in the redoubt, but here they were heavily counter-attacked by large enemy reinforcements and, being subjected to an extremely rapid and accurate shrapnel fire from concealed guns in the vicinity of Sinn, they were forced to fall back to the position from which they started. The troops, who had been under arms for some 30 hours, including a long night march, were now much exhausted and General Aylmer considered that a renewal of the assault during the night, 8th-9th March, could not be made with any prospect of success. Next morning the enemy position was found to be unchanged and General Aylmer decided upon the immediate withdrawal of his force to Wadi, which was reached the same night.

Heroic Failure.—General Aylmer was then removed from his command, supreme control at the front being vested in Major-General Gorringe on March 12. He was in supreme command during the final phase of the operations which extended from the 11th March to the 30th April. General Aylmer returned to India to take command of the Mhow division, which is one of the prize appointments in the Indian Army. Fresh troops now began to arrive up the river and it was decided to renew active operations as soon as the reinforcement was complete. Investigations were made as to the feasibility of an advance on Kut by the right bank from Sheikh Saad. Sir Percy Lake's despatch says that this scheme was abandoned because it was shown that the terrain was not floodproof and might be inundated by cutting the embankments. It is understood, however, that the shortage of land transport was also an important factor in the abandonment of this renewed project to turn to the Turkish right. It was therefore decided to take the Hannah position and to advance up the left bank. The Seventh Division, which had been engaged in sapping up the enemy's front trenches, was continually under heavy fire and hampered by floods. By March 28th the saps were 150 yards from the Turkish front line. On April 1 the 13th Division moved up from Sheikh Saad to relieve them in the front trenches preparatory to the assault. Owing to the heavy rains the assault had to be postponed until April 5 when the 13th Division rushed the Turkish first and second lines in quick succession and by 7 a.m. the whole position was in our hands. The enemy's position was a maze of deep trenches occupying a frontage of only 1,300 yards between the Tigris and the Suwaikieh marsh and extending over 2,600 yards from front to rear. Meanwhile on the right bank the 3rd Division had been gaining ground. In the morning the 8th Infantry Brigade, led by the Manchesters, captured the Turkish position on the Abu Roman mounds. During the day the river rose considerably and it was evident that a fresh flood was coming down. This pointed to the urgency of capturing the Falahiyah and the Sann-al-yat positions, three and six miles respectively west of the Hannah position, before the rising river should enable the Turks to flood the country. After nightfall a heavy bombardment was directed at the Falahiyah position after which the 13th Division assaulted and captured a series of deep trenches in several lines and by 9-30 p.m. it was completely in our hands and consolidated. The 7th Division which had hitherto been in support now moved forward and passing through the 13th Division

took up a position about 2 miles east of Sann-ai-yat ready to take the northern portion of these entrenchments at dawn on April 6. The line of direction was to be maintained by moving with the left flank along a communication trench which joins the Falahiyah and Sann-ai-yat positions. At dawn when the assault was to have taken place the troops were still some 2,300 yards from the enemy's position owing to the difficultics of the ground, and the advance was checked 700 yards from the Turkish trenches where the advanced line had to fall back on the supporting third line.

During the night, 8th-9th April, the 18th Division took the place of the 7th Division in the trenches and at 4-20 a.m. advanced to the assault on Sann-ai-yat. When within 300 yards of the enemy's front line they were discovered by the Turks who sent up lights and flares and opened a heavy rifle and gun fire. The first line, including detachments of the 6th King's Own Royal Lancaster Regiment, 8th Welsh Fusiliers, 6th Loyal North Lancashire Regiment and 5th Wiltshire Regiment penetrated the centre of the enemy's front line trench. In the glare of the lights the second line lost direction, wavered and fell back on the third and fourth lines. The support thus failed to reach the front line at the critical moment in spite of the most gallant and energetic attempts of the officers concerned to remedy the matter. Our troops, who had reached the enemy's trenches, were heavily counter-attacked by superior numbers and driven back to from 300 to 500 yards from the enemy's line, where the brigades dug themselves. In view of the rapid exhaustion of the supplies in Kut the attack was now changed to the right bank of the river, which offered prospects of a speedier success. On the morning of April 17th the 7th and 9th Infantry brigades assaulted the Beit Aiessa position and took it at the point of the bayonet. The 13th Division was now brought up to support the 3rd in this operation, but the Turks initiated a series of strong counter-attacks. These lasted throughout the night, and although they were repelled with heavy loss—the Turkish losses are estimated at 4,000—they had checked the advance and had regained that portion of Beit Aiessa near the river. As the enemy's defences at Sann-ai-yat showed signs of weakening a further attack was made on the left bank. On April 22nd the assault was delivered, the front being limited to one of a brigade owing to the floods. The first and second line trenches were carried; but only a few men were able to reach the third line; as large Turkish reinforcements came up and delivered a counter-attack our troops had to fall back to their original line. This closed the military operations for the relief of Kut. Sir Percy Lake in his despatch said:—

"General Gorringe's troops were nearly worn out. The same troops had advanced time and again to assault positions strongly held by a determined enemy for 18 consecutive days. They had done all that men could do to overcome not only the enemy but also the exceptional climatic and physical obstacles and this on a scale of rations which was far from being sufficient in view of the exertion they had undergone but which the shortage of river transport had made it impossible to augment. The need for rest was imperative."

An effort was made to run the blockade of Kut with the fast river steamer Julnar, which had been prepared for the purpose, but she was sunk by gunfire with 270 tons of supplies on April 24th. The Royal Flying Corps dropped into Kut eight tons of supplies. But these could make no appreciable difference to the situation and on April 29th Kut surrendered.

Euphrates and Oil Fields.—During these three phases practically nothing of importance occurred on other parts of the Mesopotamian Front.

In January the advance against the hostile positions in front of Kut took place. It was thought advisable to make a demonstration northwards to a short distance from our advanced post at Nasiriyah with a view to deterring as many of the hostile tribes on the Hai river as possible from joining forces with the enemy. The major portion of the force at Nasiriyah accordingly moved out at the beginning of January, and encamped in the neighbourhood of Butaniyah Lake early in February. When the object in view had been attained the troops returned to Nasiriyah. On the return journey some of the villages with whom friendly relations hitherto obtained apparently mistaking our movement for a retreat treacherously attacked our rearguard. The attack was beaten off, a party of the Royal West Kents and the 30th Mountain Battery behaving very gallantly. A small force marched out the following morning, from Nasiriyah, surprised and destroyed the offending villages in retaliation for their treachery. Nothing of importance occurred on the Karun line, that country and the neighbourhood of the oilfields as well as the country to the west and the south of Basra remaining quiet and undisturbed.

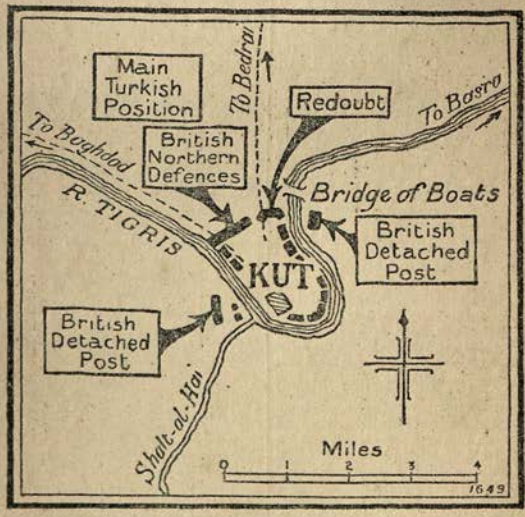
The Siege of Kut.—No account of the siege of Kut-al-Amara has been published and we are dependent on fragmentary items for our knowledge of what occurred. General Townshend was back at Kut on December 3, and almost immediately he was cut off from General Gorringe's division on the line of communications with headquarters at the town of Amara. Within two days the Turks had got round to Sheik Saad, some 40 miles lower down the Tigris, and though a hospital ship about the same time managed to run the gauntlet of the enemy's guns, with some casualties, this was the last traffic that passed down the river. Exhausted as they were, the men had only three or four days to complete the preparations for the defence. It proved sufficient. The Turks, hoping to carry the position before General Townshend was ready, began an assault at once. On December 8th they shelled the defenders all day, and again on the 9th, and for the whole of the next three days bombardments were varied by infantry attacks from all sides. After this failure the Turks desisted until Christmas. The fresh attacks were less costly to us, but there was one nervous moment when the enemy breached a fort on the right flank of the Kut peninsula, from which, however, the garrison promptly and with great gallantry dislodged him. This was the last serious attack. The Turks made up their minds that the garrison were not to be beaten in open

fight, and prepared to starve them out. The beleaguered force was in no enviable position. Kut-al-Amara is a small and dirty village situated in a bend of the Tigris in the midst of the Chaldean desert. Its only outstanding feature is the blue glazed minaret of the local mosque; it has the usual Oriental bazaar, otherwise it consists merely of the mean dwellings of the Arab population. Kut is a place of no resources apart from the traffic passing up and down the river; indeed the Tigris and the Euphrates are the beginning and the end of all enterprise, military and commercial, in Mesopotamia. The miserable town was full of wounded, for in the first series of attacks alone they had 1,100 casualties and many were suffering from disease. So far as natural conditions were concerned, however, the British were in a better position than the Turks, who were on lower ground, and therefore liable to be flooded out by the river. The official announcement of the surrender said:—

"After a resistance protracted for 143 days and conducted with a gallantry and fortitude that will be for ever memorable, General Townshend has been compelled by the final exhaustion of his supplies to surrend r.

"Before doing so he destroyed his guns and munitions.

"The force under him consists of 2,970 British troops of all ranks and services, some 6,000 Indian troops and their followers."



Criticism and Action.—The close of the siege brought to a head the indignation widely felt at the conduct of the operations. Even before the battle of Ctesiphon, complaints had been received that the treatment of the sick and wounded fell lamentably short of modern requirements, but the numbers concerned were comparatively small. The evil grew to dreadful proportions with the extension of the operations. It is commonly reported that for the battle of Ctesiphon provision was made for only five hundred casualties; there were four thousand five hundred. The medical arrangements completely collapsed; wounded were brought down the river on horse boats practically untended; and a mass of preventible suffering and loss of life was caused. In January affairs went from bad to worse. The attacks initiated first under the orders of General Nixon and afterwards by General Aylmer were delivered before the medical arrangements were organised; the new divisions were thrown into the fight before their ambulances and field hospitals had arrived. As their casualties were heavy, the suffering was deplorable. As soon as this reached the ears of Lord Hardinge, then Viceroy, he appointed a small Commission consisting of Sir William Vincent, I.C.S. Member of Council for Bihar and Orissa, and General Bingley, to inquire into the position. The Commission was subsequently strengthened by the addition of Mr. J. R. Ridsdale, who had visited India for the purpose of arranging for the distribution of Red Cross funds. This Commission took evidence in India and in Mesopotamia and reported in June. As one result of this action the wounded in the March and April fighting were far better tended; but a fresh phase supervened. The season which followed the fall of Kut was unusually hot and sickly. Cases of heat-stroke, typhoid, para-typhoid, cholera and

dysentery occurred in very large numbers. The transport was so bad that there was no proper treatment for the sick, nor food for the well. These criticisms gathered force; they were accentuated by the failure of the relief operations and the vagueness of the discussion regarding the responsibility for the advance from Kut to Baghdad. Bowing to the storm, the Government appointed a Parliamentary Commission to examine the whole situation. It consists of Lord George Hamilton, Chairman; Lord Donoughmore and the following members of the House of Commons;—Lord Hugh Cecil, Sir Archibald Williamson, Mr. Hodge, Commander J. C. Wedgwood, Admiral Sir Cyprian Bridge, and General the Rt. Hon. Sir Neville Lyttelton.

THE MESOPOTAMIAN COMMISSION.

The report of the Commission was published in July 1917. It was signed by all the members, except Commander Wedgewood, who submitted a minority report, distinguished by such intemperance that it commanded little attention. In view of the importance of the Report we give a full summary of the principal recommendations. The Blue book also included the report of the Vincent Commission, whose chief findings were endorsed by the larger and more authoritative body.

We find that:—

The expedition to Mesopotamia was a justifiable military enterprise, but one of such a character that it required, during its inception and development, the most careful watching and preparation.

The division of responsibility between the India Office and Indian Government, the former undertaking policy, and the latter the management of the expedition, was, in the circumstances, unworkable. The Secretary of State, who controlled the policy, did not have cognisance of the capacity of the expedition to carry out the policy. The Indian Government, who managed the expedition, did not accompany developments of policy with the necessary preparations, even when they themselves proposed those developments.

The scope of the objective of the expedition was never sufficiently defined in advance, so as to make each successive move part of a well-thought-out and matured plan.

The attempt in India entirely to control and regulate the wants of the expedition from Simla was an administrative mistake, and representatives of the Headquarter Staff with wide powers should from the first have been stationed at Bombay, the port of embarkation and disembarkation to and from Mesopotamia.

The Commander-in-Chief himself, or his representatives acting as liaison officers, should from time to time have visited Mesopotamia with a view to keeping the Headquarters Staff in touch with the needs of the expedition. In consequence of such want of touch, the military authorities at Simla did not appreciate or realise the difficulties of campaigning in Mesopotamia and from such lack of knowledge failed to make sufficient provision for surmounting the difficulties and drawbacks.

The successive advances from Basra to Kurna, Kurna to Amara, and from Amara to Kut were sanctioned as being necessary for the protection and consolidation of positions already taken, and were therefore of a defensive character.

The Advance on Baghdad.—The advance to Baghdad under the conditions existing in October, 1915, was an offensive movement based upon political and military miscalculations and attempted with tired and insufficient forces, and inadequate preparation. It resulted in the surrender of more than a division of our fines fighting troops and the casualties incurred in the ineffective attempts to relieve Kut amounted to some 23,000 men.

Various authorities and high officials are connected with the sanction given to this untoward advance. Each and all, in our judgment, according to their relative and respective positions must be made responsible for the errors in judgment to which they were parties and which formed the basis of their advice or orders.

The weightiest share of responsibility lies with Sir John Nixon, whose confident optimism was the main cause of the decision to advance. The other persons responsible were in India, the Viceroy (Lord Hardinge), and the Commander-in-Chief (Sir Beauchamp Duff); in England, the Military Secretary of the India Office (Sir Edmund Barrow), the Secretary of State for India (Mr. Austin Chamberlain), and the War Committee of the Cabinet. We put these names in the order and sequence of responsibility.

We have included the War Committee of the Cabinet and the Secretary of State for India amongst those upon whom responsibility for this misadventure rests. It is true that the War Committee and the Secretary of State acted upon the opinion of their expert military advisers and that the Secretary of State only gave his assent to the advance after he had received an assurance from the General on the spot that he had an available force sufficient for his purpose. But so long as the system of responsible departmental administration exists in this country, those who are political heads of departments in time of war, whether they be civilian or military, cannot be entirely immune from the consequences of their own action.

Supplies, Equipments, Reinforcements.—The general armament and equipment were on a scale intended for an Indian frontier expedition, were not up to the standard of modern European warfare, and were quite insufficient to meet the needs of the Mesopotamian Expedition. These shortcomings were the natural result of the policy of indiscriminate retrenchment pursued for some years before the war by the Indian Government under instructions from the Home Government, by which the Army was to be prepared and maintained for frontier and internal use.

During the period for which the Indian Government were responsible, the commissariat of the expedition cannot be said to have been up to the standard of our Army in France, but there was no general breakdown. In other essentials the expedition was badly and insufficiently equipped.

As regards reinforcements we find that up to the occupation of Kut in September, 1915, the Mesopotamian Expedition was, in fact, numerically strong enough to cope with the Turkish forces brought against it. The arrangements for drafts and reinforcements had, however, from the first, been lacking in co-ordination as between the Indian and Home authorities, and this want of co-ordination led to the failure to supply effective reinforcements in connection with advance on Baghdad and the operations for the relief of Kut.

Transport.—(*a*) From the first the paramount importance, both of river and railway transport in Mesopotamia, was insufficiently realised by the military authorities in India.

(*b*) A deficiency of river transport existed from the time the army left tidal water and advanced up-river from Kurna. This deficiency became very serious as the lines of communication lengthened and the numbers of the force increased.

(*c*) Up to the end of 1915 the efforts made to rectify the deficiency of river transport were wholly inadequate.

(*d*) For want of comprehensive grasp of the transport situation and insufficiency of river steamers we find the military authorities in India are responsible. The responsibility is a grave one.

(*e*) River hospital steamers were an urgent requirement for the proper equipment of the expedition, and were not ordered until much too late.

(*f*) With General Sir John Nixon rests the responsibility for recommending the advances in 1915 with insufficient transport and equipment. The evidence did not disclose an imperative need to advance without due preparation. For what ensued from shortage of steamers, General Sir John Nixon must, in such circumstances, be held to blame.

(*g*) During the first four months of 1916, the shortage of transport was fatal to the operations undertaken for the relief of Kut. Large reinforcements could not be moved to the front in time to take part in critical battles. Based upon information received from General Townshend, as to the urgent necessity for his immediate relief, operation were undertaken, notwithstanding the extreme transport difficulty, but in all the circumstances we do not attach blame for this to the Generals in Mesopotamia directing the operations.

(*h*) Facilities for the discharge and handling of cargo at Basra, also provision of works for the erection and repair of river craft, were hopelessly inadequate.

(*i*) Proceedings in connection with the filling of orders for river craft by the Director of the Royal Indian Marine in India, and the India Office in London, were far from satisfactory.

(*j*) Looking at the facts, which from the first must have been apparent to any administrator, military or civilian, who gave a few minutes' consideration to the map and to the conditions in Mesopotamia, the want of foresight and provision for the most fundamental needs of the expedition reflects discredit upon the organising aptitude of all the authorities concerned.

Medical Provision.—The medical provisions for the Mesopotamia Campaign was from the beginning insufficient; by reason of the continuance of this insufficiency there was a lamentable breakdown in the care of the sick and wounded after the battle of Ctesiphon and after the battles in January, 1916; there was amelioration in March and April, 1916; but that since then the improvement has been continual until it is reasonable to hope that now the medical provision is satisfactory.

The defects of medical provision caused avoidable suffering to the sick and wounded, and during the breakdown in the winter of 1915-16, this suffering was most lamentably severe.

The deficiencies, which were the main causes of the avoidable suffering of the sick and wounded, were in the provision of the following:—

(*a*) River hospital steamers.

(*b*) Medical personnel.

(*c*) River transport.

(*d*) Ambulance land transport.

To these fifth and sixth main causes may be added in respect to the operations in January 1916:—

(*e*) The absence of the medical and supply establishments of the 7th Division.

(*f*) The premature efforts to relieve Kut in consequence of the erroneous estimate of supplies in that place.

As to personal responsibility the Vincent-Bingley Commission found:—

That a grave responsibility for that part of the suffering which resulted from avoidable circumstances rests with the Senior Medical Officer of the Force, Surgeon-General G. H. Hathaway, and with General Sir John Nixon, the General Officer Commanding the Force, from April 9th, 1915, to January 19th, 1916. General Hathaway did not represent with sufficient promptitude and force the needs of the services for which he was responsible, and in particular failed to urge the necessary for adequate and suitable transport for the sick and wounded with that insistency which the situation demanded. General Nixon did not, in our opinion, appreciate the conditions which would necessarily arise if provision for the sick and wounded of his force were not made on a more liberal scale.

We endorse the finding as regards Surgeon-General Hathaway who in our judgment showed himself unfit for the high administrative office which he held.

We may add, however, as regards River and Land Transport, that while it was the duty of Surgeon-General Hathaway to urge its necessity

it was actually the duty of the Quarter-Master General's Department and of Sir John Nixon's staff to see that it was provided.

So far as Sir John Nixon is concerned, however, we think that he was throughout solicitous as to the condition of the wounded. The main mistake he made, was to rely too absolutely on the statements made to him by his Deputy-Director of Medical Service, Surgeon-General Hathaway. To that extent he may be blamed, but he stands, so far as responsibility is concerned, in a very different position from that occupied by Surgeon-General Hathaway.

The officer directly responsible for the deficiencies of medical provision in Mesopotamia, is however, the Director of Medical Services, India. This appointment was held at the beginning of the war by Surgeon-General Sir William Babtie, who held the office between March, 1914, and June, 1915, but was away from India for six weeks in February and March, 1915. He was succeeded by Surgeon-General J. G. MacNeece on July 8th, 1915, and the latter proceeded home on sick leave on April 15th, 1916. Sir William Babtie in his evidence before us impressed us as an officer of ability and knowledge, but we do not think that he brought these qualities sufficiently to bear upon the task before him. He accepted obviously insufficient medical provision without protest, and without any adequate effort to improve it. He cannot therefore be held blameless.

Surgeon-General MacNeece did not give evidence before the Vincent-Bingley Commission but he appeared before us. He was, in our opinion, an officer thoroughly desirous of fulfilling the duties assigned to him; but he was a man of advancing years and diminishing strength, unequal to the position he was called upon to fill, and his administration appears to us to show no signs of the vigour and efficiency that were required.

We find that:—

(*a*) The Home Government agreed with the Indian Government in limiting the general military preparations of India before the war in the interests of retrenchment, and provision was accordingly not made for such an expedition as that to Mesopotamia. The limitation of medical preparation and the low standard of medical treatment in the Indian Army at the outbreak of war were the natural outcome of this policy, which was pursued for many years and was in force right up to the date of the war.

(*b*) The private letters of the Secretary of State to the Viceroy showed an earnest and continuous anxiety as to the condition of the wounded, and the only comment that can be made upon the Secretary of State's procedure is that he did not fully utilize the official powers at his disposal for the purpose of forcing at an earlier period an investigation into the treatment of the wounded in Mesopotamia.

(*c*) To Lord Hardinge of Penshurst, as Viceroy, belongs the general responsibility attaching to his position as the head of the Indian Government, to which had been entrusted the management of the expedition, including the provision of medical services. In regard to the actual medical administration he appears to us to have shown throughout the utmost goodwill, but considering the paramount authority of his office, his action was not sufficiently strenuous and peremptory.

(*d*) A more severe censure must be passed upon the Commander-in-Chief, for not only did he, as Commander-in-Chief of the Army in India, fail closely to superintend the adequacy of medical provision in Mesopotamia, but he declined for a considerable time, until ultimately forced by the superior authority of the Viceroy, to give credence to rumours with proved to be true, and failed to take the measures, which a subsequent experience shows would have saved the wounded from avoidable suffering.

Criticisms on Indian Government.—The criticisms which it has been our duty to make upon the Government of India divide themselves into two categories:—

Those relating to the error of judgment shown by their advocacy of an advance to Baghdad in October, 1915. In this mistake other authorities participated and we are not disposed to say more on this matter than that, lamentable as were the consequences, the blunder was one which is not uncommon in a protracted campaign.

Our second criticisms are of a different character. They relate to the failure adequately to "minister to the wants of the forces employed in Mesopotamia." This failure was persistent and continuous and practically covered the whole of the period during which the Indian Government were entrusted with the management of the expedition. With the knowledge of the facts which we now possess and of the extent and scope of the preparations of the War Office since they undertook the management of the campaign, it is impossible to refrain from serious censure of the Indian Government for the lack of knowledge and foresight shown in the inadequacy of their preparations and for the lack of readiness to recognise and supply deficiencies. They ought to have known, and with proper touch with the expedition they could have known, what were its wants and requirements. It is true that their military system of administration was cumbrous and inept. It was, however, within the power of the Viceroy and the Commander-in-Chief to have established a more effective procedure and a closer touch with the expedition itself.

Recommendations.—We have more than once alluded to the great increase in the number of private telegrams exchanged on official business between the Secretary of State for India and the Viceroy. Whether intentionally or not, this method of communication must more or less deprive the Councils of both these high officials of the powers which, under Acts of Parliament, they have in common with the Secretary of State and Viceroy, been given in the government and administration of India. The Secretary of State informed us that he proposed to make some change so as to limit the scope and purport of such private communications. Some change is certainly constitutionally required, as the present practice seems to us to conflict with the intentions of Parliament.

Military Administration.—It is clear that the combination of the duties of Commander-in-Chief in India and Military Member of Council cannot adequately be performed by any one man in time of war, and that the existing organisations is at once over-centralised at its head, and cumbrous in its duality below.

We hope that there will be an amalgamation into one department of the two existing departments of the Commander-in-Chief and the Military Member of Council with a single and central registry, and that special efforts will be made to diminish the amount of minute-writing and to simplify the present elaborate system of clerical checking and counter-checking.

It is also clear that, so long as Simla remains the Headquarters of the Army Departments, it is essential that in the event of oversea expeditions, there should be established at the port of embarkation representatives of the Army Departments with wide power to act without reference back to Headquarters.

Medical Reform.—We are of the opinion that:—

(*a*) The Director of Medical Services in India, in war-time especially, should have far greater powers, than he at present possesses, to authorise expenditure and make purchases, and to delegate such power to his subordinates. The present elaborate system of financial check and counter-check, and correspondence with other military departments, before what is wanted can be obtained, has proved from its dilatoriness a real danger in war-time.

(*b*) Whenever an expedition is sent overseas from India, responsible officers should at once be located at the port of embarkation, with wide power to act.

(*c*) At the port of embarkation the embarkation staffs should be responsible for seeing that the equipment and personnel of each medical unit should not be separated in different vessels, but embarked together in the same vessel.

(*d*) There should be an immediate and general improvement in the whole standard of comfort and accommodation in the hospitals for British troops in India.

(*e*) As regards the medical treatment of Indian troops, no time should be lost in substituting a Station Hospital system for the present regimental treatment.

(*f*) All deficiencies usually allowed to prevail in peace-time in the mobilisation equipment of general hospitals should be made good.

(*g*) Base Depots of Medical Stores should be reintroduced into the Indian Field Service organisation, and kept ready for mobilisation.

(*h*) At the outset of every campaign there should be provided a seperate superior sanitary organisation and staff charged with the arrangements for preserving and safeguarding the health of the fighting troops, and responsible to the Principal Medical Officer of the force, but otherwise entirely separate from the organisation for the care of the sick and wounded.

(*i*) The Field Service Ration should receive very careful reconsideration and alteration in the light of experience in Mesopotamia. This especially applies to the rations for Indian troops.

Reception of the Report.—The publication of the report, with its painful revelations of the breakdown of the military machine and the preventible sufferings of the sick and wounded, aroused a tempest of indignation in the United Kingdom. In part this feeling was evidently intensified by certain proof of officials callousness; for instance, when Major Carter, I. M. S., called attention to the condition of the wounded from Ctesiphon he was threatened with dismissal; when Major-General Cowper demanded better river transport he received the same treatment from the Commander-in-Chief. But in addition to the quite natural and justified indignation caused by the report, its publication was made the occasion for a degrading exhibition of political rancour, in which every political grudge was worked off. At one time the Government proposed to face the storm by the appointment of a special tribunal in order to deal with the cases of the principal offenders; but after Mr. Asquith and Mr. Balfour had protested in dignified and honourable language against the spirit of "witch-hunting" that had been manifested, this scheme was dropped and no special action was taken, the principal military offenders being left to the ordinary military authorities. Apart from this manifestation of political malevolence, the most distinguished episode of the discussion was a speech by Lord Hardinge in the House of Lords in justification of his Viceroyality, which had been attacked by the Commission. In the course of this speech, which made a deep impression on the House, Lord Hardinge summarised the assistance which India gave to the Imperial authorities, despite her anxious preoccupations, during the early part of the war. He said:—

Lord Hardinge's Defence.—"In August and the early part of September (1914) an Indian expeditionary force of an Indian army corps of two divisions, under the command of General Sir James Willcocks, and one cavalry division was sent to France, and a second cavalry division was sent to join this force in the following November. But India had a *land* frontier, needing at all times a watchful eye, and at times such as those giving cause for special care. To guard that frontier three divisions were immediately mobilised. In September 1914, by the orders of His Majesty's Government, a mixed division of troops was sent to East Africa, the co-operation of India with this force being limited to the supply of personnel, transport, equipment, and ships. In October and November 1914, two divisions of Indian infantry and one brigade of cavalry were sent to Egypt. It was not till the 26th September, by which time eight divisions had already been mobilised and sent either abroad or to the frontier, that the possibility of action at the head of the Persian Gulf was foreshadowed by the Secretary of State, and it was on the 31st October that, Turkey having entered the war against us, hostilities commenced with the seizure by an Indian brigade of the mouth of the Shatt-el-Arab. This brigade was reinforced to the strength of a division before the capture of Basra on the 23rd November, and in three months' time increased to an army corps of two

divisions. Of these ten divisions of infantry, and two divisions and two brigades of cavalry, enumerated above, seven divisions and all the cavalry were sent overseas. But in addition to these organised forces twenty batteries of artillery, and thirty-two battalions of British infantry, the flower of the British army, many of them 1,000 strong and more, were sent to England. A battalion of Indian infantry was sent to Mauritius, another to the Cameroons, and two battalions to the Persian Gulf, while Indian troops also co-operated with the Japanese at the capture of Tsingtau. Approximately, 80,000 British officers and men and 210,000 Indian officers and men, all fully trained and equipped, were despatched overseas. I would here remark that the largest Indian expedition ever previously sent overseas amounted to 18,000 men.

"A comparison between the ordinary establishment of the army in India and of the units sent overseas in connection with various expeditions shows in a striking manner the military effort made by India to assist the Empire.

		Sent overseas.
British establishment—		
Regiments, cavalry	9	7
Battalions, regular infantry ..	52	44
Batteries, Royal Artillery ..	56	43
Indian establishment—		
Regiments, cavalry	39	20
Battalions, infantry	138	89

"In return for these troops India received, many months after the outbreak of war and the despatch of Indian divisions overseas, twenty-nine Territorial batteries, and thirty-four Territorial battalions, but these were unfit for immediate employment on the frontier or in Mesopotamia until they had been entirely rearmed and equipped and their training completed. Many of them were sent later to Mesopotamia, whether as units or drafts for regular regiments, and all did splendid service. It is, however, a fact that for the space of some weeks before the arrival of the Territorials, the British garrison in India was reduced to about 15,000 men. The safety of India was thus imperilled in the interests of the Empire as a whole. In such a cause I was naturally prepared to take risks and I took them confidently because I trusted the people of India, and I am proud to say they fully justified my confidence in them.

"From the moment of the outbreak of war, and after, it was the steady policy of the Government of India to give readily to the Home Government of everything it possessed, whether troops or war material. In the summer of 1914 India was absolutely ready for war in the light of what was then accepted as the requisite standard of preparation of her military forces and equipment. The army was at war strength, the magazines were full, and the equipment was complete. Thanks to these facts, India was able, not merely to send her divisions to France and elsewhere, but also to supply to England within the first few weeks of the war 70,000,000 rounds of small-arm ammunition, 60,000 rifles, and more than 550 guns of the latest pattern and type. In the first week of the war some 530 officers of the Army in India, who could ill be spared, were handed over to the War Office, and nearly 3,000 additional combatant officers have been sent overseas since the war began. It would be out of place to give here in detail the enormous quantities of material supplied to the Home Government, such as tents, boots, saddlery, clothing, &c., but every effort was made to meet the ever increasing demands made by the War Office, and it may be stated without exaggeration that India was bled absolutely white during the first few weeks of the war. At that time there was no question of an expedition to Mesopotamia, and the Government of India's sole preoccupation was to make every possible sacrifice in order to secure a successful prosecution of the war in France. Then came a moment, after the commencement of operations in Mesopotamia, when India's own needs became pressing, and the results of her previous readiness to make sacrifices began to be severely felt. It was then our turn to address repeated and insistent demands to the War Office for troops, drafts, aeroplanes, machine guns, bombs, &c., most of which were either refused or else given with a sparing hand on account of what was held to be the even greater need of our forces in France. It is not my intention in saying this to make any recriminations, for I recognise the difficulty that existed at home, but I only wish that your Lordships and the public should understand the difficulties which we in India had to face in meeting the needs and demands of the Mesopotamian force."

OCCUPATION OF BAGHDAD.

Capture of Baghdad.—Fortunately before the publication of the report had aroused this burst of ignorant spleen in London, the whole situation in Mesopotamia was transformed by the brilliant series of operations which resulted in the capture of Baghdad and the paralysis for the greater part of a year of Turkish power in these regions. When the surrender of Kut-al-Amara cleared the local situation, and the retirement of Sir Percy Lake from the local command brought a fresh mind to work in the person of Sir Stanley Maude, whilst the replacement of Sir Beauchamp Duff as Commander-in-chief in India by Sir Charles Monro altered entirely the direction of affairs at Army Headquarters, the situation was considered *de novo*. The Turks, under the inspiration of their German masters, were known to be considering wide and far-reaching plans. In his despatch on the operations from August 1916 to March 31st 1917, which covered all the operations embraced in the occupation of Baghdad, Sir Stanley Maude indicated these plans in the following passage:—

"The enemy's plan appeared to be to contain our main forces on the Tigris, whilst a vigorous campaign, which would directly threaten India, was being developed in Persia. There were indications, too, of an impending move down the Euphrates towards Nasariyeh. To disseminate our troops in order to safeguard the various conflicting interests involved would have relegated

us to a passive defensive anywhere, and it seemed clear from the outset that the true solution of the problem was a resolute offensive, with concentrated forces, on the Tigris, thus effectively threatening Baghdad, the centre from which the enemy's columns were operating."

Opening Phases.—The period intervening between the fall of Kut and the beginning of December was one of intense preparation. Reinforcements and stores of all kinds were accumulated, and for the first time in its existence the Mesopotamian Force was properly equipped with artillery and aircraft. By the end of December all was ready for the attack. At this time the enemy occupied the same positions on the Tigris front which he had held during the summer, and it was decided first to secure possession of the Hai river; secondly, to clear the Turkish trench systems still remaining on the right bank of the Tigris; thirdly, to sap the enemy's strength by constant attacks, and give him no rest; fourthly, to compel him to give up the Sannaiyat position, or in default of that to extend his attenuated forces more and more to counter our strokes against his communications; and, lastly, to cross the Tigris at the weakest part of his line as far west as possible, and so sever his communication.

The Hai positions was seized with little difficulty in the middle of December, but the clearing of the Khadairi Bend, which was undertaken on Jan. 6, involved severe hand-to-hand fighting and it was not until Jan. 19, that the enemy, who had suffered heavy losses, was finally driven out.

The Dahra Bend.—On January 11th, whilst Lieutenant-General Cobbe was still engaged in clearing up the Khadairi Bend, General Marshall launched the series of operations destined to push the Turks out of the Hai Salient and the Dahra Bend. These were not completed until February 16th, and were marked throughout by hard fighting, in which the Turks lost heavily. It is impossible to follow these operations in detail, without more space than is at our disposal; but in summarising them Sir Stanley Maude said:—

"Thus terminated a phase of severe fighting, brilliantly carried out. To eject the enemy from this horseshoe bend, bristling with trenches and commanded from across the river on three sides by hostile batteries and machine-guns, called for offensive qualities of a high standard on the part of the troops. That such good results were achieved was due to the heroism and determination of the infantry, and to the close and ever-present support rendered by the artillery, whose accurate fire was assisted by efficient æroplane observation."

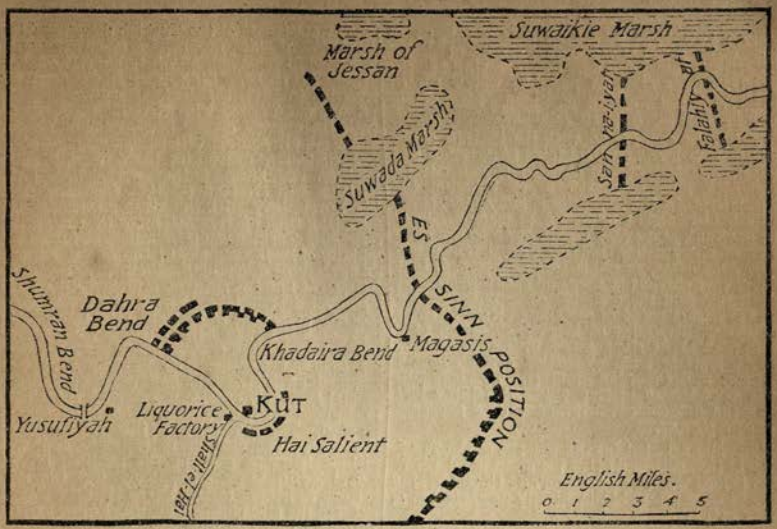
The enemy had now, after two months of strenuous fighting, been driven entirely from the right bank of the Tigris in the neighbourhood of Kut. He still held, however, a very strong position, defensively, in that it was protected from Sannaiyat to Shumran by the Tigris, which also afforded security to his communications running along the left bank of that river. The successive lines at Sannaiyat, which had been consistently strengthened for nearly a year, barred the way on a narrow front to an advance on our part along the left bank, whilst north of Sannaiyat the Suwaikieh Marsh and the Marsh of Jessan rendered the Turks immune from attack from the north.

On the other hand, we had, by the application of constant pressure to the vicinity of Shumran, where the enemy's battle-line and communications met, compelled him so to weaken and expand his front that his attenuated forces were found to present vulnerable points, if these could be ascertained. The moment then seemed ripe to cross the river and commence conclusions with the enemy on the left bank. To effect this it was important that his attention should be engaged about Sannaiyat and along the river line between Sannaiyat and Kut, whilst the main stroke was being prepared and delivered as far west as possible.

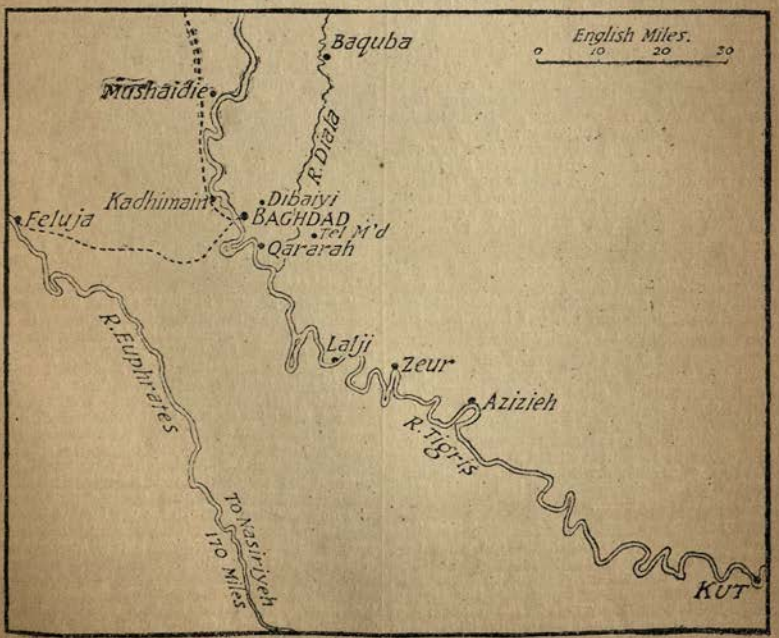
Storming of Sannaiyat.—We pass now to the third phase of the operations, the storming of the *immensely strong positions* which the Turks had prepared at Sannaiyat, protected by the river on one flank and the impassable marshes on the other—an ideal position for defence.

Lieut.-General Cobbe maintained constant activity along the Sannaiyat front, and as soon as the right bank had been cleared orders were issued for Sannaiyat to be attacked on February, 17. The sodden condition of the ground, consequent on heavy rain during the preceding day and night, hampered final preparations, but the first and second lines on a frontage of about 400 yards were captured by a surprise assault with little loss. Before the captured trenches, however, could be consolidated they were subjected to heavy fire from artillery and trench mortars, and were strongly counter-attacked by the enemy. The first counter-attack was dispersed but the second regained for the enemy his lost ground, except on the river bank, where a party of Gurkhas maintained themselves until dusk, and were then withdrawn. The waterlogged state of the country and a high flood on the Tigris now necessitated a pause, but the time was usefully employed in methodical preparation for the passage of the Tigris about Shumran.

On February 22, the Seaforths and a Punjabi battalion assaulted Sannaiyat, with the same objective as on the 17th. The enemy were again taken by surprise and our losses were slight. A series of counter-attacks followed, and the first three were repulsed without difficulty. The fourth drove back our left but the Punjabis reinforced by an Indian Rifle battalion and assisted by the fire of the Seaforths, who were still holding the Turkish trenches on the right front, re-established their position. Two more counter-attacks which followed were defeated. As soon as the captured position had been consolidated two frontier force regiments assaulted the trenches still held by the enemy in prolongation of and to the north of those already occupied by us. A counter-attack forced our right back temporarily, but the situation was restored by the arrival of reinforcements and by nightfall we were in secure occupation of the first two lines of Sannaiyat. The brilliant tenacity of the Seaforths throughout this day deserves special mention.



Scene of the operations for the re-capture of Kut-al-Amara.



Scene of the operations for the capture of Baghdad.

The Crossing of the Tigris.—This paved the way for the fourth stage of the operations as planned, the crossing of the Tigris, as far west as possible, which turned the remaining Turkish positions at Sannaiyat and opened the road to Baghdad.

Feints in connection with the passage of the Tigris were made on the nights of the 22nd and 23rd opposite Kut and at Magasis respectively. Opposite Kut preparations for bridging the Tigris opposite the Liquorice Factory under cover of a bombardment of Kut were made furtively in daylight, and every detail, down to the erection of observation ladders, was provided for. The result was, as afterwards ascertained, that the enemy moved infantry and guns into the Kut peninsula and these could not be retransferred to the actual point of crossing in time to be of any use. The feint at Magasis consisted of a raid across the river made by a detachment of Punjabis assisted by parties of Sappers and Miners and the Sikh Pioneers. This bold raid was successfully carried out with trifling loss and the detachment returned with a captured trench mortar.

The site selected for the passage of the Tigris was at the south end of the Shumran Bend, where the bridge was to be thrown, and three ferrying places were located immediately downstream of this point.

The cavalry, the artillery, and another division crossed the bridge. The cavalry attempted to break throughat the northern end of the Shumran Bend to operate against the enemy's rear along the Baghdad road, by which aeroplanes reported hostile columns to be retreating, but strong Turkish rearguards entrenched in nalas prevented them from issuing from the peninsula. During this day's fighting at Shumran, heavy losses had been inflicted on the enemy, and our captures had been increased in all to four field guns, eight machine-guns, some 1,650 prisoners, and a large quantity of rifles, ammunition, equipment, and war stores. The gunboats were now ordered up-stream from Falahiyeh, and reached Kut the same evening.

While these events were happening at Shumran, Lieut.-General Cobbe cleared the enemy's sixth line at Sannaiyat, the Nakhailat and Suwada positions and the left bank as far as Kut without much opposition.

The capture of the Sannaiyat position, which the Turks believed to be impregnable, had only been accomplished after a fierce struggle, in which our infantry, closely supported by our artillery, displayed great gallantry and endurance against a brave and determined enemy. The latter had again suffered severely. Many trenches were choked with corpses, and the open ground where counter-attacks had taken place was strewn with them.

The Capture of Baghdad.—Official publications are often remarkable for what they leave out; the despatches relating to these operations are no exception to the rule. There is a widespread belief that the plan of campaign stopped short at the recovery of Kut-al-Amara and the covering positions, and did not aim at the occupation of Baghdad. But the completeness of the Turkish defeat, and the rapidity of his retreat, seemed to open the road to Baghdad, and it is understood that seizing the position Sir Stanley Maude asked for sanction to advance. This was given and the pursuit was pressed with vigour. On February 25th the cavalry moved north-west in pursuit and coming in contact with the enemy eight miles from Shumran drove him back to his main position two miles farther west. This main position was stormed on the following day, the Royal Navy with its river gunboats, co-operating with effect. Attempts to cut off the retreating Turkish columns failed owing to the rapidity of their retirement; the Turks stripped themselves of everything which hindered their retirement and left the road strewn with material of all descriptions. The pursuit was temporarily broken off at Azizieh, fifty miles from Kut and half way to Baghdad—the point where General Townshend organised his weak columns for the first advance to Baghdad. It was resumed on March 5th, and pressed, without special incident, except a brilliant charge by th Hussars at Lalji, until the Dialah River was reached. The crossing of this tributary of the Tigris was stubbornly resisted, and was ultimately made good by the heroism of the Loyal North Lancashires. This was the last serious resistance and on March 11th our troops entered the city and the cavalry at once pushed through to take up a position four miles to the north. In relating the notable incidents in our occupation of the city Sir Stanley Maude says :—

"For over a fortnight before we entered Baghdad the enemy had bee removing stores and articles of military value, and destroying property which he could not remove, but an immense quantity of booty, part damaged, part undamaged, remained. This included guns, machine-guns, rifles, ammunition, machinery, railway workshops, railway material, rolling-stock, ice and soda water plant, pipes, pumps, cranes, winches, signal and telegraph equipment, and hospital accessories. In the arsenal were found among some cannon of considerable antiquity all the guns, (rendered useless by General Townshead) which fell into the enemy's hands at the capitulation of Kut in April 1916.

"A brief account is given of the pursuit of the Turks which followed the occupation of the city. On the right bank of the Tigris the retreating enemy had entrenched a strong position south of Mushaidie railway station, some twenty miles north of Baghdad. A force under Lieut.-General Cobbe carried this on March 14, after a brilliant charge by the Black Watch and Gurkhas. At Mushaidie Station the enemy made his last stand, but the Black Watch and Gurkhas rushed the station at midnight, and pursued the enemy for half a mile beyond. The enemy's flight was now so rapid that touch was not obtained again, and on March 16 our aeroplanes reported stragglers over a depth of twenty miles, the nearest being twenty-five miles north of Mushaidie.

"On the same day a post was established on the right bank of the Dialah, opposite Baqubah, thirty miles north-east of Baghdad, and four days later Baqubah was captured. On

March 19 our troops occupied Feluja, thirty-five miles west of Baghdad, on the Euphrates, driving out the Turkish garrison. The occupation of Feluja with Nasariyeh already in our possession, gave us control over the middle Euphrates from both ends. During the remainder of the month minor operations were undertaken on the Dialah, pending the arrival of the Russian forces advancing from Persia. The total number of prisoners taken during the period December 13 to March 31, was 7,921."

Subsequent Events:—The official despatches stop at this point, but much hard campaigning and heavy fighting followed. With a brief interval to reorganise his forces Sir Stanley Maude pressed forward on the Baghdad-Samarra railway and by successive stages stormed every Turkish possession until Samarra was occupied. That represented the northern limit of the advance. The position at Samarra is a very strong one and forms the natural outwork for the protection of any force in occupation of Baghdad. The hardest fighting was on the right flank. In the earlier narrative of the operations in Mesopotamia, reference is made to the Turkish invasion of Persia. That bulked largely in the enemy's programme. By throwing a Turkish force into that country, and by letting loose the raiders which always swarm in Persia, it was hoped to set the country in a ferment and to establish conditions when the German emissaries who had carefully prepared the ground might seize control of the country. This was destined to be only a stage towards Afghanistan, and Turkish troops, with German gold, were to have been used to incite the Afghans to take up arms against the Indian Empire. The struggle ebbed and flowed with varying fortune: At one stage the Russians under General Baratoff, using Kasvin as a base, drove the Turks out of one position after another until they reached Kasr-i-Shirin, and the approaches to Khannikin, and promised to join hands with the British forces on the Tigris. A handful of Cossacks actually effected a junction, but the fall of Kut-al-Amara liberated a Turkish Division for operations in Persia, and unable to resist this large force General Baratoff fell back stage by stage, the Turks re-occupying Kermanshah and Hamadan and the Russians retiring to the mountainous country in the direction of Kasvin. The brilliant success of the operations around Kut once more changed the situation. The Turkish Division operating in Persia had to retire, closely followed by the Russians. There was nothing in the nature of a pursuit and little fighting; the Turks fell back in good order to the road which runs through Kifri to Mosul on the east of the Jebel Hamran range and the Russians joining hands with the British on the Khannikin road.

Whilst the Turkish forces holding the Kut sector had been badly hammered in the operations which have been described, the Division from Persia reached the battle zone, wearied perhaps, but in no sense demoralised. Manœuvred with some skill, they gave Sir Stanley Maude a good deal of trouble on the Dialah position and in the gaps in the Jebel Hamran range, and there was much weary campaigning until they were driven back into the hills and bottled there.

The Campaign of 1917-18:—If the Russians had been in the same fighting form as they were when they stormed Erzerum and Erzinghan, the campaign in Asia Minor might have been closed. Never was there a more favourable opportunity for a great combined movement, which would have carried the Russian Armies of the Caucasus to Sivas possibly right across Asia Minor to Alexandretta; the Russian Army of Lake Urumia to Mosul and the Persian Column along the Kifri-Mosul Road. But when the time was most opportune the disorders commenced which during the Revolution have paralysed the Russian armies; the British were left unsupported and the Russian cavalry which joined them on the Khannikin road were practically destitute of military equipment. The hot weather was a period of rest on both sides; on the British side a season of unusual severity was mitigated by a great improvement in the medical arrangements.

As the Russian confusions developed, the enemy press began to be filled with stories of a great Germano-Turk expedition to recover Baghdad, to be directed by General Falkenhayn. The fact that the Turks had nothing to fear from the Russians lent colour to these stories and it is the general expectation that the campaigning season of 1917-18 will be marked by hard fighting in Mesopotamia. Time will show what measure of reality there is in the enemy's boasts; but first blood has fallen to the British.

After an advance on the night of September 27th-28th, we attacked the enemy's advanced position at Mushaid, four miles east of Ramadie early on the morning of the 28th. Mushaid was occupied with little difficulty, and our column continuing to advance manœuvred away from the river, attacking the Turkish main position about Ramadie from the south-east, while our cavalry moved wide round the west of Ramadie. A severe battle ensued, lasting throughout the 28th, but by nightfall our troops had carried the enemy's main position and were encircling Ramadie from the east, south-east and south at a distance of under two miles from the town. Our cavalry completed the land cordon west of Ramadie, whilst the Euphrates runs along the north side of the town. The enemy during the night attempted to break out westwards, but were headed back by our cavalry. Our troops resumed the attack vigorously on the 29th at day-break with the result that by 9 a.m., the enemy were surrendering everywhere. The enemy were taken by surprise and practically the whole garrison of Ramadie fell into our hands. Our captures included 18 guns, 12 machine guns, 600 wounded and 3,200 unwounded prisoners. During the night of the 27-28 another column moved out north-east of Baghdad, and after a sharp skirmish with a Turkish cavalry detachment inflicted casualties capturing four prisoners and three hundred Turkish supply camels.

Map of the Persian Gulf.

THE PERSIAN GULF.

The situation in the Persian Gulf, which is at present the corner stone of the Indian frontier problem, is one of baffling indefiniteness. Our first appearances in these waters was in connection with the long struggle for supremacy with the Portuguese, the French and the Dutch, who had established trading stations there. With the capture and destruction of the great entrepot which the Portuguese had established at Ormuz, and the supersession of the land route by the sea route, coupled with the appearance of anarchy in the interior, the importance of the Gulf declined. The Indian Government remained there primarily to preserve the peace, and this task it has since successfully performed. Piracy, which was as destructive as the ravages of the Barbary corsairs, was stamped out, the Trucial Chiefs who occupy the Pirate Coast were gradually brought into close relations with the British Government, and the vessels of the Royal Navy have since kept watch and ward in the Gulf, whilst our Consuls have regulated the external affairs of the Arab rulers on the Arabian Coast.

A Policy of Abnegation.

In return for these services Great Britain has claimed no selfish advantages. The waters of the Gulf are as free to the navigation of other flags as to the Red Ensign. The only territorial possession is the tiny station of Bassidu. Point after point has at one time or another been occupied by British troops. Muhammerah and the lower valley of the Karun valley were occupied during the war with Persia in 1857. Bushire was long held in the same connection, and still bears marks of our regime in the one tolerable road. The Island of Kharak was occupied from 1838 to 1842, and again in 1857. We had a military station at Kais during the Pirate wars, and a military and naval station at Kishm from 1820 to 1879. Jask was occupied as a cable station, but subsequently returned to Persia. The only surveys of the waters are British; the only cables are British: the few navigation marks are maintained by the British India Company, and two steamship services, a fast mail service and a slow trading service, are run by the same corporation. Apart from these direct acts, Great Britain might at any time have seized the whole Arabian Coast and the Persian shore. But in pursuit of a resolute self-denying ordinance she has kept the peace and demanded no reward.

European Intrusions.

Left to herself, Great Britain would desire no other policy. But the affairs of the Persian Gulf have passed into the region of international politics, and the past quarter of a century has witnessed successive efforts to turn the British position. Basing her interference on a treaty which gives her equal rights with Great Britain, France attempted to acquire a coaling station at Jissa, near Maskat, and subsequently obstructed British efforts to stamp out the slave trade, and the arms traffic, which was supplying weapons of precision to the tribes on our North-Western Frontier. Turkey, whether acting on her own volition, or as the *avant courier* of Germany, threatened the territory of the Sheikh of Bahrein, who is in special relations with us, and of the Sheikh of Koweit, who owns the only harbour which would make a Gulf terminus of the Baghdad Railway. Persia, stirred from Teheran, when Russian influence at the court of the Shah in Shah was supreme, established a foreign Customs service in the Gulf, and pressed our good friend, the Sheikh of Muhammerah. Russia and Germany sent heavily-subsidised merchant ships into the Gulf, in order to establish trading rights, and posted Consuls, where there was neither trade nor legitimate interest. The last of these machinations, a German attempt to wring a concession from the Sheikh of Shargah, was comparatively recently defeated. The collapse of authority in Persia has raised, in an acute form, the whole future of the Persian shore. In short, the situation has changed from one where the influence of Great Britain was supreme, to one where it is challenged at every point, more especially by the indirect process of commercial strategy, at which a nation, brought up in the traditions of free trade, is handicapped.

The Gulf and the Empire.

With these attacks there has come a closer appreciation of the bearing of the Persian Gulf on the defence of the Indian Empire. The strategic importance of these waters has been laid down by a writer of unchallenged authority and unbiassed mind. Writing in the *National Review*, Admiral Mahan said, "Concession in the Persian Gulf, whether by formal arrangement (with other Powers) or by neglect of the local commercial interests which now underlie political and military control, will imperil Great Britain's naval situation in the Farther East, her political position in India, her commercial interests in both, and the Imperial tie between herself and Australasia." Following this, successive British Governments have made declarations of policy which are satisfactory, as far as words can go. Speaking in the House of Lords on May 5, 1903, Lord Lansdowne, then Secretary of State for Foreign Affairs, said "We (*i.e.*, His Majesty's Government) should regard the establishment of a naval base or of a fortified port in the Persian Gulf by any other Power as a very grave menace to British interests which we should certainly resist with all the means at our disposal." This declaration of policy has since been endorsed by Sir Edward Grey. But the question which arises is whether, in view of the intrusion of foreign Powers with aggressive designs, and the changing conditions on the littoral, the purely negative policy which has hitherto satisfied Great Britain will suffice. It is a hard fact but a true one, that if British authority disappeared to-morrow, it would leave no other relic than the Abadan oil refinery; a few consular buildings and the tradition of justice and fair dealing. That is a question which can best be considered after a brief survey of the various jurisdictions which are established in the Gulf.

Maskat.

Maskat, which is reached in about forty-eight hours from Karachi, is outside the Persian Gulf proper. It lies three hundred miles south of Cape Musandim, which is the real entrance to the Gulf, but its natural strength and historical prestige combine to make it inseparable from the politics of the Gulf, with which it has always been intimately associated.

The approach to Maskat is dramatic. The mail steamer gently feels her way along a coast more black and forbidding even than the iron-bound littoral of the Gulf of Suez, which is so familiar to the eastward passenger. Suddenly there appears on the coast the white houses of the trading settlement of Mattra, which lies to the north of Maskat. Then with a sharp turn the bow of the steamer passes under a gaunt rock painted with the names of the warships which have visited Maskat for half a century, and enters the landlocked harbour. Twin fortresses erected by the Portuguese command the heights which overlook the town: the town itself clusters on the shore and climbs the high ground behind it, and itself is shut off from the Arabian desert by a stout wall on the landward side. Formerly Maskat was part of a domain which embraced Zanzibar, and the Islands of Kishm and Larak, with Bunder Abbas on the Persian shore. Zanzibar was separated from it by agreement, and the Persians succeeded in establishing their authority over the possessions on the eastern shore. Sultan Syed Feyzul, the intelligent Arab ruler, who reigned over Maskat only, though he claimed a shadowy suzerainty over the chiefs on the coast of Oman, died in October, 1913.

The relations between Britain and Maskat have been intimate for a century and more. It was under British auspices that the separation between Zanzibar and Maskat was effected, the Sheikh accepted a British subsidy in return for the suppression of the slave trade and in 1892 sealed his dependence upon us by concluding a treaty pledging himself not to cede any part of his territory without our consent. Foreign intrigues with Maskat did not commence until 1894, when the French, in pursuit of the pin-pricking policy through which they were avenging Egypt, and perhaps to assist Russia, established a consulate there. The Sultan was induced to cede to France a coaling station at Jissa, but this was such a clear violation of the Treaty of 1892 that it could not make good, and France had to accept the poor alternative of a leased depot. A more serious dispute arose over the use of the French flag to cover the slave trade. Native craft would secure the protection of the French flag by registering at Jibutil, and then defy the Sultan of Maskat, and they were enabled to traffic in slaves with impunity, inasmuch as there was rarely a French warship in the neighbourhood to search them. In April 1903 the trouble came to a head, and the French flagship Infernet was sent to Maskat to demand the release of dhows which had been arrested for a flagrant breach of the quarantine rules. This emphasised the necessity of a permanent settlement, and the question was referred to the Hague Tribunal, and a working compromise arranged. It was adjudged by the Hague tribunal in 1905 that "after January 2, 1892, France was not entitled to authorise vessels belonging to subjects of H. H. the Sultan of Maskat to fly the French flag," except on condition that their "owners or fitters-out had established, or should establish, that they had been considered and treated by France as her protéges before the year 1863," though "owners of dhows who before 1892 had been authorised by France to fly the French flag retained this authorisation as long as France renewed it to the grantee." The conclusion of the *entente* with France put an end to these pinpricks, but one important issue remained outstanding until 1914. France claimed under the Anglo-French Treaty of 1862 freedom of trade with Maskat. There was carried on for years a lucrative arms traffic with the Gulf, rifles and ammunition being shipped from Europe to Maskat, and thence distributed all over the littoral and even to the North-West Frontier of India. The extent of this evil compelled the British Government to intervene, and elaborate arrangements were made to check the traffic by arresting the dhows carrying arms and by harrying the gunrunners ashore. This is more fully considered under Gunrunning (q. v.) In effect, the British warships had to witness the dumping of cargoes on the shore at Maskat, see them loaded into dhows, and trust to their own vigilance to arrest these consignments on the high seas. Prompted by the Colonial Party, the French Government refused to yield one jot of their treaty rights, in the hope that Great Britain would buy them out by surrenders at Gambia. The difficulty was largely overcome by the establishment of a bonded warehouse for arms at Maskat, where all consignments have to be deposited, and whence they are only issued under certificates of destination; and by an agreement negotiated in 1914 the French Government recognised the new Arms Traffic Regulations and abandoned the privileges and immunities secured to them by Treaty. Compensation was paid by the British Government to those French merchants whose stocks were rendered valueless by the Regulations.

In 1873 jurisdiction was given to the Vice-Admiralty Court at Aden and the consuls within the dominions of Zanzibar, Maskat, and Madagascar for the more effectual suppression of the slave trade on the East Coast of Africa. By an Order-in-Council which came into force on August 1, 1914, the Act had been extended so as to comprise the Court established by the Persian Coast and Islands Order-in-Council, 1907. Thus the Consuls-General for Fars and the coasts and islands of the Persian Gulf will be able to enforce the suppression of the slave trade in that neighbourhood which was agreed to be desirable in a treaty made with the Persian Government so long ago as 1882.

The Sultans have been in a difficult position for a good many years. They hold their capital of Maskat, the adjacent town of Matra, one or two other coast towns, and certain points in the interior, but as they possess few troops they find themselves unable to control the roving Beduin who wander at will over most of the State. When the Beduin wanted money they

were wont to ride down to Matra, the centre of the date trade, and threaten to sack the town. The late Sultan, who died in 1913, was generally compelled to bribe them to go away. The rising which began in 1913 was a more serious affair. A Pretender, Sheikh Abdullah, seized the inland town of Semail, which stands in a spacious fertile valley where are grown most of the dates for which Maskat is famous. Great Britain has special interests at Maskat, based upon various documents, the chief of which is one drafted in 1891-2. The late Sultan asked us to protect him against the Pretender. We said we would protect his capital and coasts, but could not send an expedition into the interior against the elusive Beduin. We sent Indian troops to Maskat, and they have been there ever since. It is quite probable that the tribesmen were excited by the news of the Great War, and determined to push their own operations more vigorously. The rising culminated in an attack on the outposts of Maskat on the 10th and 11th January 1915, Detachments of the 95th Infantry and the 102nd Grenadiers had previously been sent to support the Sultan's forces and the attack was driven back, the rebel casualties amounting to 300 men. There were no further attacks, and the rebels were reported to be greatly disheartened.

British Consul, Major L. B. H. Haworth.
Agency Surgeon, Vacant.

The Pirate Coast.

Turning Cape Musandim and entering the Gulf Proper, we pass the Pirate Coast, controlled by the six Trucial Chiefs. The ill-name of this territory has now ceased to have any meaning, but in the early days it had a very real relation to the actual conditions. The pirates were the boldest of their kind, and they did not hesitate to attack on occasion, and not always without success, the Company's ships of war. Large expeditions were fitted out to break their power, with such success that since 1820 no considerable punitive measures have been necessary. The Trucial Chiefs are bound to Great Britain by a series of engagements, beginning with 1806 and ending with the perpetual treaty of 1853 by which they bound themselves to avoid all hostilities at sea, and the subsequent treaty of 1873 by which they undertook to prohibit altogether the traffic in slaves. The relations of the Trucial Chiefs are controlled by the British Resident at Bushire, who visits the Pirate Coast every year on a tour of inspection. The German attempt to obtain a concession from the Sheikh of Shargarh has been mentioned. A more serious question arose in 1912 when a landing party from H. M. S. Fox, searching for contraband arms at Debai, was fired at by the resident Arabs and five men killed and nine wounded. The Sheikh made ample amends to the British Resident, and submitted to a fine. There was at first the suspicion that this *emeute* arose from the spread of pan-Islamism on the coast, studiously fostered from Constantinople, and that it indicated a weakening respect for British authority. But fuller enquiries tended to show that it arose from an unfortunate series of misunderstandings. The commercial importance of the Pirate Coast is increasing through the rise of Debai. Formerly Lingah was the entrepot for this trade, but the exactions of the Belgian Customs officials in the employ of Persia has driven this traffic from Lingah to Debai. The Trucial Chiefs are—Debai, Abu Thabee, Shargah, Ajman, Um-al-Gawain and Ras-el-Kheyma.

Bahrein.

North of the Pirate Coast lies the little Archipelago which forms the chiefship of the Sheikh of Bahrein. Of this group of islands only those of Bahrein and Maharak are of any size, but their importance is out of all proportion to their extent. This is the great centre of the Gulf pearl fishery, which, in a good year, may be worth half a million pounds sterling. The anchorage is wretched, and at certain states of the tide ships have to lie four miles from the shore, which is not even approachable by boats, and passengers, mails and cargo have to be landed in on the donkeys for which Bahrein is famous. But this notwithstanding the trade of the port is valued at over a million and a quarter sterling, and the customs revenue, which amounts to some eighty thousand pounds, makes the Sheikh the richest ruler in the Gulf.

Bahrein has passed through more than usually chequered experiences. Not the least formidable of these are the efforts of the Turks to threaten its independence. These took definite form in the third quarter of the last century, when Midhat Pasha, Vali of Basra, occupied the promontory of El Kater, as well as El Katif, over against Bahrein, and converted El Hasa into a district. The war with Russia put an end to these designs, but they were revived and the Turks at El Kater are still a menace to Bahrein, but negotiations for their withdrawal are pending. The Sheikh by the treaty of 1861, entered into special engagements with the British Government, by whom his rights are guaranteed.

In the neighbourhood of Bahrein is the vast burying ground which has hitherto baffled archæologists. The generally accepted theory is that they are relics of the Phœnicians, who are known to have traded in these waters.

Political Agent, Capt. P. G. Loch.

Koweit.

In the north-west corner of the Gulf lies the port which has made more stir than any place of similar size in the world. The importance of Koweit lies solely in the fact that it is the one possible Gulf terminus of the Baghdad Railway. This is no new discovery, for when the Euphrates Valley Railway was under discussion, General Chesney selected it under the alternative name of the Grane—so called from the resemblance of the formation of the Bay to a pair of horns—as the sea terminus of the line. Nowhere else would Koweit be called a good or a promising port. The Bay is 20 miles deep and 5 miles broad, but so shallow that heavy expense would have to be incurred to render it suitable for modern ocean-going steamers. It is sheltered from all but the westerly winds, and the clean thriving town is peopled by some 20,000 inhabitants, chiefly dependent on the sea, for the mariners of Koweit are noted for their boldness and hardihood.

The political status of Koweit would baffle the ingenuity of the international jurist to

find a definition. Nominally the Sheikh owns allegiance to the Sultan of Turkey, from whom he has accepted the honorary title of Kaimakam, or Local Governor. In practice, he has always been independent. In 1898, the Turks attempted to convert their nominal sovereignty into something more actual; but the Sheikh Mubarak approached the British Government and placed his interests under their special protection. When, however, the German surveyors earmarked Koweit for the terminus of their line, the position of the Sheikh was indirectly attacked. To the north of Koweit there is a deep indentation in the lowlying shore chiefly occupied by the swampy island of Bubyan. Here a long narrow channel runs to Umm Khasa, the Khor Abdulla. It is sometimes held to be an alternative to Koweit as a Gulf Terminus, and with a view to earmarking it, the Turks have established military posts at Umm Khasa and on Bubyan Island. Threatened by domestic feuds, raids by sea, and attack by land, Sheikh Mubarak, with a British backing, has fended off all assaults on his position, and with realisation of the fact that Basra must, in any circumstances, be the commercial terminus of the Baghdad Railway, the importance of Koweit has tended to recede.

Political Agent, Major R. E. A. Hamilton.

Muhammerah.

On the opposite side of the entrance to the Shatt-el-Arab lie the territories of a Sheikh who stands to the Persian Government in much the same relation as does the Sheikh of Koweit of Koweit to the Government of Turkey—Sheikh Khazzal of Muhammerah. Nominally, he is subject to Teheran, on whose behalf he governs his territories as Governor; in practice he is more like a semi-independent vassal. In personal characteristics, too, Sheikh Khazzal has much in common with Mubarak; he has proved that he possesses many of the qualities of an administrator, and has resisted Persian encroachments on his authority in all directions save one—despite his strong antipathy to the agents of a centralised government, the Persians have installed an officer of their Belgian Customs service at Muhammerah. The town, favourably situated near the mouth of the Karun River, has grown in importance since the opening of the Karun River route to trade through the enterprise of Messrs. Lynch Brothers. This route provides the shortest passage to Ispahan and the central tableland, and already competes with the older route by way of Bushire and Shiraz. This importance has grown since the Anglo-Persian Oil Company established refineries at Muhammerah for the oil which they win in the rich fields which they have tapped near Ahwaz. Its importance will be still further accentuated, if the scheme for a railway to Khorremabad by way of *Dizful* matures. A concession for a road by this route has long been held by a British Company, and surveys for a railway are being made. There is a tacit assurance from the Persian Government that if a practicable scheme is put forward, they will facilitate the work. Such a line, meeting the projected branch from Teheran to Khanikin, would intercept the trade of Central Persia and make Muhammerah the principal outlet for the commerce of the country. Sheikh Khazzal is believed to have formed an excellent working understanding with his brother chief across the water, and as the head of the great Kaab tribe he is no mean power in south-western Persia.

Consul at Ahwaz, Captain E. W. C. Noel.

Consul for Arabistan (*Muhammerah*), Asstt. Surgeon C. H. Lincoln.

Basra.

In a sense Basra and Turkish Arabistan can hardly be said to come within the scope of the frontiers of India, yet they are so indissolubly associated with the politics of the Gulf that they must be considered in relation thereto. Basra is the inevitable sea terminus of the Baghdad Railway. It stands on the Shatt-el-Arab, sixty miles from its mouth, favourably situated to receive the whole water-borne trade of the Tigris and Euphrates Rivers. This is already considerable, although Turkish obstruction has closed the Euphrates to navigation, as well as the Tigris above Baghdad—between Basra and Baghdad there were two services of river steamers, one controlled by Messrs. Lynch Brothers and the other by a Turkish Company. The local traffic is valuable, for the richness of the date groves on either side of the Shatt-el-Arab is indescribable, there is a considerable entrepot traffic, whilst Basra is the port of entry for Baghdad and for the trade with Persia, which follows the caravan route *via* Kermanshah and Hamadan. When the Baghdad Railway is open, Basra must absorb the whole trade of the eastern zone, that is the trade which finds an easier outlet on the east than at Alexandrettan on the Mediterranean. That is without taking account of the possibilities of the irrigation scheme prepared by Sir William Willcocks, which should revive the glories of ancient Mesopotamia, and make Arabistan another Egypt. Even now ocean-going steamers trade regularly with Basra and load grain in bulk from its wharves. The one obstacle to the development of the port is the bar at the entrance to the Shatt-el-Arab, where there are no more than ten feet of water at low tide, and where steamers drawing more than sixteen to eighteen feet have, even at high tide, to discharge part of their cargoes into lighters before making the river. The cost of dredging the bar would not be large, and that done a first class port is almost ready made at Basra. Nothing can prevent it from becoming the port of the Middle East, and if ever the Baghdad Railway is extended to the Gulf, it will be for political not for commercial reasons.

Political Resident and H. M. Consul-General for Turkish Arabia (Baghdad), vacant.

Residency Surgeon and Assistant to the Resident, vacant.

British Consul, vacant.

The Persian Shore.

The Persian shore presents fewer points of permanent interest. The importance of Bushire is administrative rather than commercial. It is the headquarters of Persian authority, the residence of the British Resident, and the centre of many foreign consuls. It is also the main entrepot for the trade of Shiraz, and competes

for that of Ispahan. But the anchorage is wretched and dangerous, the road to Shiraz passes over the notorious kotals which preclude the idea of rail connection, and if ever a railway to the central tableland is opened, the commercial value of Bushire will dwindle to insignificance. Further south lies Lingah, reputed to be the prettiest port on the Persian coast, but its trade is being diverted to Debai on the Pirate Coast. In the narrow channel which forms the entrance to the Gulf from the Arabian Sea is Bunder Abbas. Here we are at the key of the Gulf. Bunder Abbas is of some importance as the outlet for the trade of Kerman and Yezd. It is of still more importance as a possible naval base. To the west of the town between the Island of Kishm and the mainland, lie the Clarence Straits which narrow until they are less than three miles in width, and yet contain abundance of water. Here, according to sound naval opinion, there is the possibility of creating a naval base which would command the Gulf. The great obstacle is the climate, which is one of the worst in the world. On the opposite shore, under the shadow of Cape Musandim, lies another sheltered deep-water anchorage, Elphinstone's Inlet, where the climate conditions are equally vile. But between these two points there is the possibility of controlling the Gulf just as Gibraltar controls the Mediterranean. For many years Bunder Abbas loomed large in public discussions as the possible warm water port for which Russia was seeking. Now it has reappeared in connection with the Trans-Persian railway. It is understood that the British Admiralty insist on that line meeting the sea at Bunder Abbas, where it would enter the British zone, and whence, along the Coast of Mekran, it would be commanded from the sea. The Russian concessionaires wish the line to strike the sea much further east either at the actual British frontier, Gwettur, or at Chahbar, where there are believed to be the makings of a deep-water port. So far the project has not passed beyond the stage of academic discussion. (q. v. Railways to India). On the Mekran coast, there is the cable station of Jask, and the possible port of Chahbar. The British Government temporarily occupied Bushire in 1915 in circumstances narrated in Persia (q. v.)

The Admiralty Oil Contract.

A further complexity was introduced into the position in Southern Persia, and inferentially into Gulf politics when the British Government, on behalf of the British Admiralty, entered into partnership with the Anglo-Persian Oil Company for the development of their oil fields in the neighbourhood of Maidan-i-Naphtun.

The Concession.—The concession which the company was formed in 1909 to work was originally obtained in 1901 from the Persian Government by Mr. W. K. D'Arcy. It granted the exclusive right for 60 years "to drill for, produce, pipe, and carry away oil and petroleum products throughout the Persian Empire except in the provinces of Azerbadjan, Ghilan, Mazendaran, Asdrabad, and Khorassan." The area covered is about 500,000 square miles. In 1903 a First Exploitation Company was formed as a preliminary with a capital of £600,000, of which £544,000 has been issued; £20,000 in shares in this company was allotted to the Persian Government, as well as £20,000 in cash, in return for the concession. When the Anglo-Persian Company was started in 1909 the actual holding of this Exploitation Company was limited to one square mile in the Maidan-i-Naphtun field, situated in territory belonging to the Bakhtiari Khans. Under the terms of a separate agreement the latter received 3 per cent. of the shares in any company formed to work oil in their country; and a second subsidiary company was then created, known as the Bakhtiari Oil Company, with a capital of £400,000, in order to cover the area within their territory outside the square mile allotted to the First Exploitation Company. In the First Exploitation Company the Anglo-Persian Company now owns £478,460, or 87·95 per cent, of the capital, and Persian shareholders £65,540 or 12·05 per cent.; in the Bakhtiari Company the Anglo-Persian Company owns £388,000, or 97 per cent. The Persian Government is paid a royalty of 16 per cent. on the net yearly profits. The fact that both the Government and the Bakhtiari tribes are interested in the prosperity of the company is regarded as an important factor in securing its position in a country otherwise rather unruly.

The Fields.—Oil has so far been found in quantity at Maidan-i-Naphtun, at depths of 1,200 ft. to 1,300 ft., in hard porous limestone, and has been proved at Kasr-i-Shirin; surface indications of petroleum, which are very highly thought of have also been observed at White Oil Springs, Kishm, Daliki, Ahmadi, Rudan Kuh Champa, and other places. The present production of the company is obtained entirely from the Maida-i-Naphtun area, where 30 wells have been drilled; it lies 140 miles N.N.E. of Muhammerah, which is at the junction of the Shatt-al-Arab and Karun rivers. The oil is conveyed 150 miles by pipe-line to the refinery at Abadan, while materials have to be transported to the field by river and across a difficult country by mules. The workings are entirely under the charge of British subjects; the skilled labour is mainly recruited from India, and the unskilled labourers are largely Persians, no difficulty having been experienced in securing an adequate supply. The Bakhtiari Khans "police" the field works and upper sections of the pipe-line, and an agreement has been made with the Sheikh of Muhammerah for the protection of the refinery and the lower section.

The Contract.—Under the agreement the Government are to subscribe for £2,000,000 in ordinary shares of the company, £1,000 in preference shares, and £199,000 in debentures, which will bring the aggregate capital in shares and debentures to £4,799,000. The existing ordinary shares are £1,000,000 and preference £999,000 so that under the new arrangement the Government will hold the preponderating interest in the share capital. The debentures already existing amount to £600,000. The six per cent. Preference shares, which participate to the extent of 2 per cent. in dividends after payment of 6 per cent. on the ordinary, rank equally for voting purposes. The price at which the Admiralty will obtain the oil itself is kept

Map illustrating the Anglo-Russian Agreement.

a secret. "The supply contract," says the Admiralty Memorandum, "will be regarded in the public interests as confidential." But it is stated that "provision is made for the supply for a term of years on a favourable scale of price of a reasonable proportion of the total estimated annual requirements of the Admiralty on the present basis of policy of oil consumption, and with due allowance for expansion. The contract is for oil only, and the Admiralty will make its own arrangements for transport." The agreement was criticised in some quarters on the ground that it involved the British Government in indefinite commitments in Southern Persia, and that it might be necessary to employ troops to defend Government property on foreign soil, that of Persia. But on the whole the agreement was well received in the belief that it secured the British Navy an abundant supply of cheap oil fuel. Since the conclusion of the Agreement the storage capacity at Abadan has been very largely increased. The pipeline was cut by the Turks in 1915, but subsequently restored.

Political Resident in the Persian Gulf, Sir Percy Cox, K.C.S.I., K.C.I.E., C.S.I.

Deputy Political Resident, Major A. P. Trevor, C.I.E.

Residency Surgeon at Bushire, Major J. McPherson.

Consu. at Bunder Abbas and Assistant to the Resident, W. R. Howson.

Summary.

From this brief summary of the conditions in the Persian Gulf, it will be seen that the British position is a nebulous one. We have stamped out piracy, we have kept the peace, we have sought no exclusive privileges, the commerce of these waters is freely open to the ships of all nations. But this policy is in the main negative rather than positive; it is so barren of definite territorial achievements that it is singularly open to attack; it depends for its permanent success on the maintenance of the *status quo* in a part of the world where conditions are fast changing nor was it in any way regularised by the Anglo-Russian agreement. On the contrary, by that instrument the British zone stopped short at Bunder Abbas, the British sphere being restricted to the east of a line drawn from the Afghan frontier to Gazik, Birjand, Kerman and Bunder Abbas All Persia between this line and the delimitation of the Russian zone by a line from Kasr-i-Shirin, Ispahan, Yezd, and Kakh, to the junction of the Persian Afghan, and Russian frontiers—that is to say the whole of the Persian Gulf littoral—is in the neutral zone. The Agreement made no mention of the Persian Gulf, but with the Convention a letter was published from Sir Edward Grey to the British Ambassador at Petrograd announcing that the Persian Gulf lay outside its scope, but that the Russian Government had stated during the negotiations that it did not deny the special interests of Great Britain in the Gulf and it was intimated that Great Britain reasserted them.

At the present time, of course, the politics of the Persian Gulf and of Turkish Arabistan are in a state of uncertainty owing to the war. Before the war broke out, active negotiations were conducted between the British, the Turkish and the German Governments with a view to the regularisation of the whole situation. On more than one occasion it was announced that they were on the verge of completion. The outline of these negotiations was that the Baghdad railway should proceed as far as Basra as a purely German-Turkish enterprise, but that it should not proceed beyond Basra without the approval of the British Government. Great Britain was to receive two directors on the Board to guard against differentiation of rates. The Sheikh of Koweit was to recognise the suzerainty of Turkey, but he was not to be interfered with, and Turkey was to accept the treaty of 1899. The Turkish post at El Kater, opposite to Bahrein was to be withdrawn, but incessant acts of veiled hostility at Baghdad and Basra in September and October indicated that the attitude of Turkey in the great war could not be relied upon, despite the repeated assurances of neutrality by the Grand Vizier. In October therefore a British-Indian force was sent to the Gulf, landing at Bahrein, to be ready for all emergencies. It caused little surprise then when the official announcement was received that the Turkish warships in the Black Sea had committed acts of war by firing on Russian ships and bombarding Russian coast towns. The progress of this force is recorded in the opening pages of this section.

PERSIA.

The concentration of public attention on the Persian Gulf has been allowed to obscure the frontier importance of Seistan. Yet it has been a serious preoccupation with the Government of India. Seistan lies midway north and south between the point where the frontiers of Russia, Persia and Afghanistan meet at Zulfikar and that where the frontiers of Persia and of our Indian Empire meet on the open sea at Gwattur. It marches on its eastern border with Afghanistan and with Baluchistan, it commands the valley of the Helmand, and with it the road from Herat to Kandahar, and its immense resources as a wheat-producing region have been only partly developed under Persian misrule. It offers to an aggressive rival, an admirable strategic base for future military operations; it is also midway athwart the track of the shortest line which could be built to connect the Trans-Caspian Railway with the Indian Ocean, and if and when the line from Askabad to Meshed were built, the temptation to extend it through Seistan would be strong. Whilst the gaze of the British was concentrated on the North-West Frontier, and to possible lines of advance through Kandahar to Quetta, and through Kabul to Peshawar, there can be little doubt that Russian attention was directed to a more leisurely movement through Seistan, if the day came when she moved her armies against India.

Anglo-Russian Agreement.

Whether with this purpose or not, Russian intrigue was particularly active in Seistan in the early years of the century. Having Russified Khorassan; her agents moved into Seistan, and through the agency of the Belgian Customs officials, "scientific missions" and an irritating plague cordon, sought to establish influence, and to stifle the British trade which was gradually being built up by way of Nushki. These efforts died down before the presence of the McMahon mission, which, in pursuance of Treaty rights, was demarcating the boundary between Persia and Afghanistan, with special reference to the distribution of the waters of the Helmand. They finally ceased with the conclusion of the Anglo-Russian Agreement. Since then the international importance of Seistan has waned. Whether on account of the Agreement, which bars the line of advance through Seistan, or because of the discovery of an easier route, we cannot determine, but Russian activities in railway construction, have been diverted to the Trans-Persian route, which would take a direct line through Teheran from Baku, and meet the Arabian Sea at Bunder Abbas or Chahbar.

The natural conditions which give to Seistan this strategic importance persist. Meantime British influence is being consolidated through the Seistan trade route. The distance from Quetta to the Seistan border at Killa Robat is 465 miles, most of it dead level, and it has now been provided with fortified posts, dak bungalows, wells, and all facilities for caravan traffic. The railway has been pushed out from Spezand, on the Bolan Railway to Nushki, so as to provide a better starting point for the caravans than Quetta. This railway is now to be extended into Seistan.

Owing to the activities of certain Germans and other enemy subjects in Persia during the latter half of 1915, it was found necessary to strengthen our outposts on the borders of Seistan. The troops under the command of Lieutenant-Colonel J. M. Wikeley, 28th Light Cavalry, have successfully carried out their orders and co-operated effectively with the Russian forces.

Text of the Agreement.

This Agreement, which aimed at an amicable settlement of all questions likely to disturb the friendly relations of the two countries in Asia generally, and in Persia, Afghanistan and Tibet in particular, was signed on August 31st, 1907, and officially communicated to the Powers in St. Petersburg on September 24. After reciting the desire of both Governments to maintain the integrity of Persia, and to allow all nations equal facilities for trade in that country, the Convention states that in certain parts, owing to their geographical proximity to their own territories, Great Britain and Russia have special interests. Accordingly (Art. I.): To the north of a line drawn from Kasr-i-Shirin, Isfahan, Yezd and Khakh to the junction of the Persian, Russian and Afghanistan frontiers, Great Britain agrees not to seek for itself or its own subjects or those of any other country any political or commercial concessions, such as railway, banking, telegraph, roads, transport or insurance, or to oppose the acquisition of such concessions by the Russian Government or its subjects. II. Russia gives a similar undertaking concerning the region to the south of a line extending from the Afghan frontier to Gazik, Birjand, Kerman and Bandar Abbas. III. Russia and Great Britain agree not to oppose, without previous agreement, the granting of concessions to subjects of either country in the regions situated between the lines above mentioned. All existing concessions in the regions above designated are maintained. IV. The arrangements by which certain Persian revenues were pledged for the payment of the loans contracted by the Shah's Government with the Persian Banque d'Escompte and de Prets and the Imperial Bank of Persia before the signing of the Convention are maintained. V. In the event of any irregularities in the redemption or service of these loans Russia may institute a control over the revenues situated within the zone defined by Article I. and Great Britain may do the same in the zone defined by Article II. But before instituting such a control the two Governments agree to a friendly exchange of ideas with a view to determining its nature, and avoiding any action in contravention of the principles of the Convention.

With the Convention a letter was published from Sir E. Grey to the British Ambassador at St. Petersburg announcing that the Persian Gulf lay outside its scope, but that the Russian Government had stated during the negotiations that it did not deny the special interests of Great Britain in the Gulf; and it was intimated that Great Britain re-asserted them.

Chaos in Persia.

Throughout War conditions in Persia have been extremely unsatisfactory. On the outbreak of the war the Persian Government assured the British Government of its neutrality and expressed the hope that the territory of Persia would not become the scene of hostilities. Nevertheless roving bands of Germans and Austrians, armed with rifles and machine guns, wandered through the country, trying to stir up trouble, and as was the case with Turkey, provoke Persia to take hostile action against the Allies. As the fruit of this pernicious activity the British Consul at Ispahan was fired at and slightly grazed by a bullet while his Indian orderly was killed. More serious trouble occurred in the South, at Bushire. On July 12th the presence of hostile tribesmen in the vicinity of the town was reported at the Residency. Major Oliphant, of the 96th Regiment, and Captain Ranking, Assistant Political Officer, with a mixed patrol of infantry and sowars, went out to reconnoitre. Whilst returning the patrol was ambushed and came under a hot fire from a well-concealed enemy. Both British officers were killed, with one sepoy, and two were wounded. The tribesmen afterwards disappeared. In August the state of lawlessness prevailing amongst the tribesmen of the hinterland and the danger to the lives and property of British subjects in that region, compelled the Government to assume temporary occupation of the port of Bushire. The troops engaged in this duty were attacked on the night of the 8th-9th September by a body of tribesmen numbering some 600, led by two notorious local chieftans. Reserves were

brought up and we drove the enemy at the point of the bayonet from the nullahs on the east of the island where they had collected. The cavalry then charged through the fugitives, and the guns which had been brought up to the low cliffs at the edge of the island kept them under fire for two or three miles across the flat marshy plain lying between the island and the mainland. Our casualties were:—Killed Major Pennington, 12th Cavalry, attached 16th Cavalry; 2nd-Lieutenant Thornton, I.A.R., attached 16th Cavalry. Wounded:—2nd-Lieutenant Robinson, I.A.R., attached 96th Infantry; Lieutenant Scudmore, 11th Rajputs, Lieutenant Laville, 11th Rajputs and Lieutenant Staples, 11th Rajputs.

The Persian Government having taken steps to ensure the security of British interests and the maintenance of order, the British occupation, by mutual arrangement between the two Governments, terminated on October 16th. The new Persian Governor, Darya Begi, arrived in a British launch, which had been sent to meet him at Shif, and was received at Bushire by the British Military Governor, the Civil Administrator and Senior Naval officers with their staffs who conducted him to the flagstaff where a guard of honour was drawn up. The Persian Governor warmly expressed his gratitude on behalf of his Government and himself for the reception, which the British representatives had accorded to him.

Towards the close of 1915, matters were brought to a head. The British and Russian Ambassadors were received by the Shah, who openly declared that he was a friend of the two countries. During the year, he said, the Germans had done their utmost to drive Persia into war with Russia. Prince Eyn-ud-Daule and Prince Firman Firma, who are Russophils, entered the Cabinet; the German, Austrian and Turkish Ministers left Teheran. It was afterwards announced that a force of rebels, under Turks and Germans, entrenched in the mountainous region, had been expelled near the Turkish frontier, by Russians. Muhkber-el-Sultaneh, a former Governor-General of Southern Persia, the hot-bed of anti-English intrigue, was recalled and Prince Masrat-el-Sultaneh, an uncle of the Shah, sent to succeed him with an adviser friendly to the Entente. Later an anti-British affray was reported from Shiraz. On November 10th the British Consul, the manager of the Imperial Bank of Persia, and ther male British subjects were seized and sent southwards to tribal territory, where they were detained but well-treated. The British prisoners were sent under escort to Bushire and there handed over to the British authorities unharmed. This outrage was perpetrated by the Swedish-officered gendarmerie in defiance of the orders of the Persian Government, who expressed their deep regret and promised reparation.

During the second year of the war events in Persia ebbed and flowed. A strong Russian force under General Baratoff was the means of restoring the Shah's authority over a large area. Marching from Kasvin it expelled the Germans and their heterogeneous following of Turks and Persian rebels from Isfahan and Kum and turning westwards drove them from Kermanshah and Hamadan over the frontier. The Russians also seized Kasr-i-Shirin and Khannikin on the road to Baghdad, and at one time seemed to be in a position to co-operate with the British forces in the advance on Baghdad. A small detachment of Cossacks from his force actually joined hands with the British. But the failure of the operations to relieve Kut-al-Amara and the surrender of that place released two Turkish Divisions for service elsewhere. An overwhelming superiority of numbers was concentrated against General Baratoff and he withdrew from his advanced positions, the Turks occupying Kermanshah and Hamadan. An effort to move north in the direction of Kasvin however met with sharp defeat. In Eastern Persia a British-officered force of gendarmerie under Sir Percy Sykes occupied Kerman and expelled the rebels who had acted with German assistance.

In 1917 the position was again reversed. The complete success of the operations leading to the relief of Kut-al-Amara and the occupation of Baghdad rendered the position of the Turks in Persia untenable. They retired down the Baghdad road, followed by the Russians, and then turning north up the Kiiri-Mogul Road established connection with the remnants of the Baghdad Force. Sir Percy Sykes, with his gendarmerie, marched into Shiraz. The general condition of Persia continued however to be one of thinly-veneered confusion.

H. B. M.'s Consul General and Agent of the Government of India in Khorasan:—Lieut.-Colonel W. G. Grey.

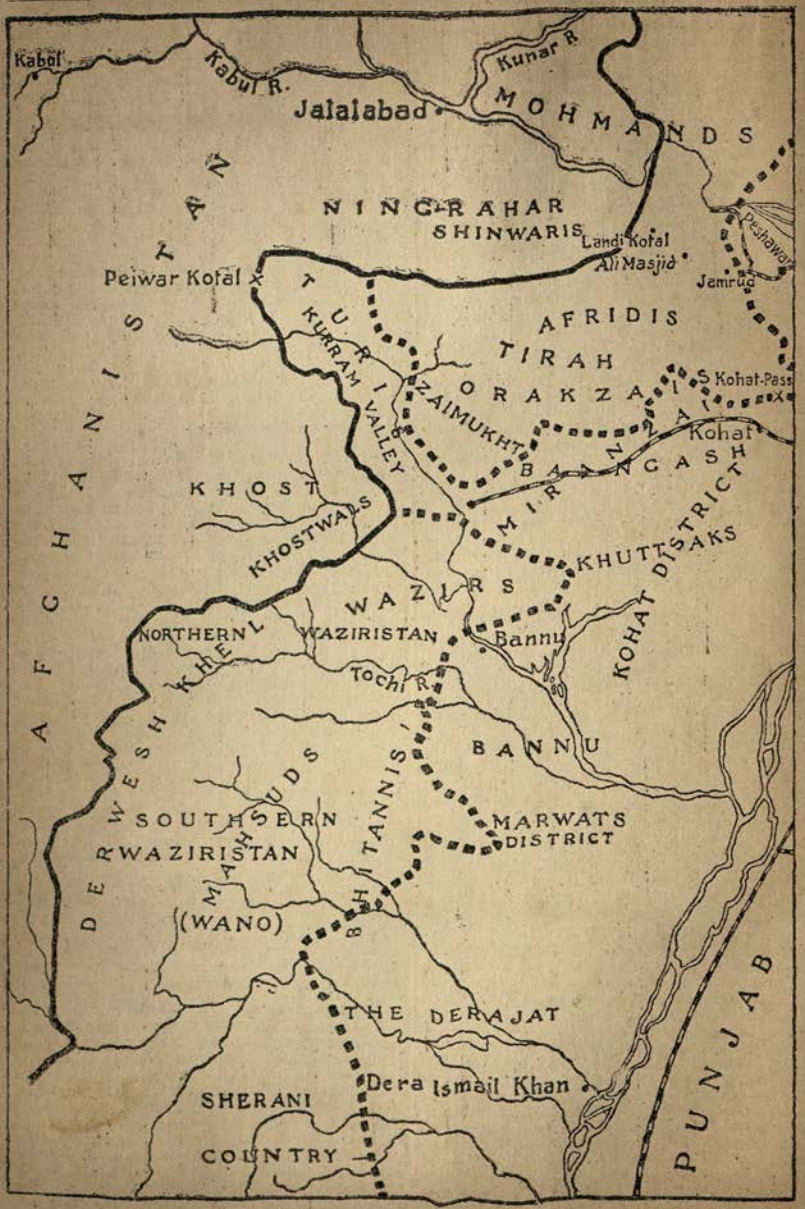
H. B. M.'s Consul in Sistan and Kain:—Lt.-Col. F. B. Prideaux, C.I.E.

Medical Officer and Vice-Consul:—Major D. Heron, I.M.S.

THE INDEPENDENT TERRITORY.

There yet remains a small part of British India where the King's writ does not run. Under what is called the Durand Agreement with the Amir of Afghanistan, the boundary between India and Afghanistan was settled, and it was delimited in 1903. But the Government of India have never occupied up to the border. Between the administered territory and the Durand line there lies a belt of territory of varying widths, extending from the Gomal Pass in the south, to Kashmir in the north; this is generically known as the Independent Territory. Its future is the keynote of the interminable discussions of frontier policy for nearly half a century.

This is a country of deep valleys and secluded glens, which nature has fenced in with almost inaccessible mountains. It is peopled with wild tribes of mysterious origin, in whom Afghan, Tartar, Turkoman, Persian, Indian, Arab and Jewish intermingle. They had lived their own lives for centuries, with little intercourse even amongst themselves, and as Sir Valentine Chirol truly said "the only bond that ever could unite them in common action was the bond of Islam." It is impossible to understand the Frontier problem unless two facts are steadily borne in mind. The strong-


Kabol
Kabul R.
Kunar R.
Jalalabad
MOHMANDS
NINGRAHAR
SHINWARIS
Landi Kotal
Ali Masjid
Peshawar
Jamrud
Peiwar Kotal
AFRIDIS
TIRAH
ORAKZAIS
Kohat-Pass
Kohat
KURRAM VALLEY
ZAIMUKHT
BANGASH
KHOST
KHOSTWALS
MIRANZA
KHUTTAKS
KOHAT DISTRICT
WAZIRS
NORTHERN WAZIRISTAN
Bannu
Tochi R.
KHEL
DERWESHS
MAHSUDS
BHITANNIS
BANNU
SOUTHERN WAZIRISTAN
MARWATS DISTRICT
(WANO)
THE DERAJAT
Dera Ismail Khan
SHERANI COUNTRY
PUNJAB
AFGHANISTAN

est sentiment amongst these strange people is the desire to be left alone. They value their independence much more than their lives. The other factor is that the country does not suffice even in good years to maintain the population. They must find the means of subsistence outside, either in trade, by service in the Indian Army or in the Frontier Militia; or else in the outlet which hill-men all the world over have utilised from time immemorial, the raiding of the wealthier and more peaceful population of the Plains.

Frontier Policy.

The policy of the Government of India toward the Independent Territory has ebbed and flowed in a remarkable degree. It has fluctuated between the Forward School, which would occupy the frontier up to the confines of Afghanistan, and the school of Masterly Inactivity, which would leave the tribesmen entirely to their own resources, punishing them only when they raided British territory. Behind both the policies lay the menace of a Russian invasion, and that coloured our frontier policy until the Anglo-Russian Agreement. This induced what was called Hit and Retire tactics; in the half century which ended in 1897 there were nearly a score of punitive expeditions, each one of which left behind a legacy of distrust, and which brought no permanent improvement in its train. The fruit of the suspicion thus engendered was seen in 1897. Then the whole Frontier, from the Malakand to the Gomal, was ablaze. The extent of this rising and the magnitude of the military measures which were taken to meet it compelled a consideration of the whole position. The broad outlines of the new policy were laid down in a despatch from the Secretary of State for India, which prescribed for the Government the "limitation of your interference with the tribes, so as to avoid the extension of administrative control over tribal territory." It fell to Lord Curzon to give effect to this policy. The main foundations of his action were to exercise over the tribes the political influence requisite to secure our imperial interests, to pay them subsidies for the performance of specific duties, but to respect their tribal independence and leave them, as far as possible, free to govern themselves according to their own traditions and to follow their own inherited habits of life without let or hindrance.

New Province.

As a first step Lord Curzon took the control of the tribes under the direct supervision of the Government of India. Up to this point they had been in charge of the Government of the Punjab, a province whose head is busied with many other concerns. Lord Curzon created in 1901, the North-West Frontier Province, and placed it in charge of a *Chief Commissioner* with an intimate frontier experience, directly subordinate to the Government of India. This was a revival of a scheme prepared by Lord Lytton in 1877, and often considered afterwards, but which had slipped for lack of driving power. Next Lord Curzon withdrew the regular troops so far as possible from the advanced posts, and placed these fortalices in charge of tribal levies, officered by a handful of British officers. The most successful of these is the Khyber Rifles, which have steadfastly kept the peace of that historic Pass. At the same time the regular troops were cantoned in places whence they could quickly move to any danger point, and these bases were connected with the Indian Railway system. In pursuance of this policy frontier railways were run out to Dargai, and a narrow-gauge line, since converted to the broad-gauge, was constructed from Kushalgarh to Kohat at the entrance of the Kohat Pass, and to Thal at the mouth of the Kurram Valley. These railways are being completed by lines to Tonk and Bannu. By this means the striking power of the regular forces was greatly increased. Nor was the policy of economic development neglected. The railways gave a powerful stimulus to trade; and the Lower Swat Canal converted fractious tribesmen into successful agriculturists. This policy of economic development is receiving a great development through the completion of the Upper Swat Canal (*q. v.* Irrigation). Now it is completed there are other works awaiting attention.

Greater Peace.

So far this policy has been completely justified by results. During Lord Curzon's Viceroyalty there was no frontier expedition. The recalcitrancy of the Mahsud Waziris necessitated punitive measures, but they took the form of a blockade. Critics have declared that the blockade was scarcely distinguishable from an expedition, but that is a secondary matter. It was not until 1908 that the peace of the border was directly disturbed, and then the continued recalcitrancy of the Zakka Khel sept of the great Afridi tribe compelled the Government to take action. General Willcocks, moving swiftly down the Chura Pass, and Colonel Roos-Keppel taking the Khyber Rifles down the Bazar Valley inflicted such condign punishment on them that they were glad to accept terms of peace negotiated by the main Afridi tribe. A month later, action was necessary against the Mohmands. In this case the rebellious tribesmen were actively supported by Afghan levies, assembled and fitted out in Afghan territory at Lalpura. Two brigades entered their country and defeated them. There was a diversion when lashkars numbering nearly twenty thousand moved up from Afghanistan and threatened the British post of Landi Kotal in the Khyber. They too were driven back into Afghan territory, and the trouble was at an end. The Amir, who had been strangely quiescent, asserted his authority and the irregular warfare waged from Afghan territory ceased.

Policy Justified.

These expeditions have been seized upon by critics to condemn the present policy. They justify it. Thanks to the confidence engendered by ten years of non-aggression, the disturbed area was localised, the Khyber was kept open, the Afridis lent their aid in concluding peace. For these reasons, when the Government of India proposed the occupation of further strategical points in order to control the Zakka Khels, the Secretary of State wisely imposed his embargo. The strength of the

position was still further demonstrated when in 1910 the tribesmen suffered heavy losses in consequence of measures to suppress the arms traffic (*q. v.* Gun-running). The frontier is always in a state of suppressed ferment. No one knows what will happen to-morrow. But the tribesmen, feeling confident in the knowledge that no attack on their independence is contemplated and growing richer in consequence of the development of trade and agriculture, are more easily handled. With the removal of the Russian menace, or rather its transference to Persia, the importance of the North-West Frontier has tended to subside. There are still heard mutterings of the necessity for a reversion to the forward policy, and for the occupation of the Independent Territory right up to the Durand line. But they are not regarded seriously. The tribesmen are so saturated with rifles and ammunition, as the result of importations from the Persian Gulf, that the task would be long and costly. When it was achieved the frontier problem would only have shifted. Instead of a frontier against the Independent tribesmen, India would have a frontier against Afghanistan, and the problem would still be present, *only* in an aggravated form.

The Frontier and the War.

The history of the Independent Territory during the year was one of unrest, though this was local and sporadic, and did not take the form of a concerted disturbance, such as that which embarrassed the Government of India in 1897.

During October and November 1914, various reports were received that attempts were being made to stir up fanaticism along the Frontier. At the end of November 1914, certain influential mullahs in Independent Territory led a Khostwal lashkar of some 2,000 men to the neighbourhood of Miranshah in the **Tochi Valley**. On November 29th, a portion of the North Waziristan Militia under Major G. B. Scott, attacked the enemy and, in a skilfully fought action, inflicted a severe defeat on the tribesmen who fled in a demoralised condition. The prompt and vigorous action of the North Waziristan Militia checked what might have been a serious rising.

On January 7th, 1915, operations were carried out by the Bannu Moveable Column and a portion of the North Waziristan Militia with a view to defeating a large Khostwal lashkar that had crossed into British territory and attacked Spina Khaisora post. Of the British forces, only the North Waziristan Militia were actually engaged with the enemy, but the operations were successful, the enemy losing some 50-60 men killed and being driven in confusion over the frontier. On March 26th, 1915, the Bannu Moveable Column together with a portion of the North Waziristan Militia moved out from Miran Shah and attacked a large Khostwal lashkar, estimated at 7,000 to 8,000 men, which was threatening that place. The attack was entirely successful. The enemy's losses were estimated at 200 killed and 300 wounded and they retreated rapidly across the frontier.

With the exception of raiding, this portion of the frontier remained quiet until October 1915, when unrest among the **Mahsuds** necessitated precautions being taken in the Derajat Brigade area. A militia piquet was attacked on November 12th and on the 18th a detachment of the 45th Rattray's Sikhs on piquetting duty near Khajuri Kach in the Gomal was fired upon by some 80-100 Mahsuds. The successful operations combined with pressure brought to bear upon the Mahsuds by the civil authorities prevented any tribal outbreaks on a considerable scale, but raiding has been constant, which has necessitated constant vigilance and action on the part of the troops.

Towards the end of 1914 information was received of anti-British preaching by certain mullahs in the **Mohmand country** but, with the exception of a raid in the neighbourhood of Shabkadar in January 1915, which was easily driven off, no serious acts of aggression were committed. On April 13th, 1915 ,however reports were received that the Mohmands were collecting with a view to raiding Shabkadar. During May 1915 the Swatis had been engaged in inter-tribal quarrels, but on June 18th the situation in Upper Swat, where the advance of a lashkar to the Adinzai tract threatened the safety of the Chitral road and Chakdara post, necessitated the concentration at Chakdara of the Malakand Moveable Column. The rapid concentration of the troops had an excellent effect and prevented any outbreak.

Gatherings in **Buner** during July 1915 had been reported, but the tribesmen remained quiet until August 15th, when information was received that a certain mullah, known as the Haji Sahib of Turangzai, was in the Ambela Pass with several thousand men, preparing to invade British territory. His gathering included a number of the Hindustani fanatics, a sect inhabiting the Buner border country. A small column from Mardan was at once moved to Rustam on the Buner border. On August 17th, a hostile gathering of some three to four thousand tribesmen debouched from the Ambela Pass and moved towards Rustam, while a further force was reported to be in the neighbouring hills to the north-west. Brigadier-General S. F. Crocker at once attacked the Ambela Pass gathering and routed it with loss. A Brigade under the command of Brigadier General N. G. Woodyatt, at Rustam, took the offensive against the tribesmen whenever they appeared and during this period Brigadier-General Woodyatt was engaged with the enemy on three occasions, on all of which he was successful in driving them back into the hills with loss and destroying the villages in which they had harboured.

While these operations were in progress information was received that on August 20th a tribal gathering of some fifteen to twenty thousand men under the Sandaki mullah was advancing down the left bank of the **Swat river** to invade Lower Swat. Our outposts were heavily attacked on the night of the 28th-29th August, but the enemy were driven off with loss. The next morning the column moved out and destroyed a fort and shelled several villages, which were occupied by the enemy. As a result of these operations the tribesmen

dispersed, and made no further attempts at offensive action for some time.

During August 1915, there had been some talk of **Jihad** on the **Mohmand border**, where various religious leaders had been active, and large tribal gatherings led by these fanatical mullahs, were reported to have collected on August 28th. Two brigades with a mounted column under Brigadier-General S. F. Crocker and Divisional Artillery, were therefore ordered up to the neighbourhood of Shabkadar between August 30th, and September 2nd, while a Mobile Column under Lieutenant Colonel A. B. Longden, 38th Dogras, was formed at Mardan and subsequently moved to Abazai. On September 3rd large bodies of tribesmen were observed moving in the foothills and preparing **Sangars** in the vicinity of Hafiz Kor, but no steps were taken to prevent them collecting as it was desired to entice them out into the plain. By the evening of September 4th it was calculated that the hostile force had reached its maximum strength (it was then about ten thousand) and Major-General F. Campbell, C.B., D.S.O., Commanding 1st Peshwar Division, decided to attack. The action was fought on the following day; the enemy resisted stoutly and displayed great bravery, tenaciously holding on to their sangars, but were defeated with heavy loss and driven from their position. An opportunity occurred for cavalry action and a successful charge was made against the tribesmen.

Between September 20th and 24th further hostile gatherings were reported on this border and the mullahs made great efforts to stir up their fellows to invade British territory. No lashkar, however, crossed the border until early in October 1915 when lashkars, numbering some 9,000 men, again collected in the neighbourhood of Hafiz Kor. Major General Campbell, who had strengthened his force by another brigade under Brigadier-General N. G. Woodyatt, took the offensive against this gathering on October 8th from Shabkadar. The enemy offered strong opposition, especially on our right flank, where the Mobile Column from Abazai was co-operating, but were defeated and forced back into the hills. A detachment of the Khaibar Rifles from Fort Michni took part in the fight. In this operation armoured cars were used for the first time in action in India and proved of great value. These successful operations brought the unrest among the Mohmands to an end.

Although further gatherings were reported in **Swat** there was no actual outbreak until October 1915, when the tribesmen again became active. Their lashkars rapidly increased, and on October 26th some 3,000 Bajauris advanced towards Chakdara, with a view to arousing the tribes of Dir and Swat to attack the fort at that place. The Malakand Moveable Column, at once decided to attack; and moving out from Chakdara Camp on October 27th, he engaged, routed, and pursued the enemy, who were severely handled and lost a standard. As the result of this action there was no further gathering on this border.

In October 1916 the **Mohmands** again became restive, necessitating close precautions, but no actual outbreak occurred.

Mahsud Expedition.

Throughout the greater part of 1917 peace on the border was preserved in a very remarkable degree. The one exception was on the Mahsud section of the frontier where the tribesmen assumed an attitude of great truculence repeatedly raiding British districts; it was necessary to take punitive measures. The Viceroy in describing these measures in the course of his speech in the Imperial Legislative Council on the 5th September said:

"Speaking last February, of the North-West Frontier, I told you that the only discordant elements for the time being were the Mahsuds and the Mohmands, that the punishment of the Mahsuds must stand over till we had the leisure to deal conclusively with them and that the Mohmands were paying for their misdeeds by a close blockade. Since then the Mahsuds, by flagrant acts of hostility, by attacks on our posts and convoys and by incessant raiding, made it impossible for us to hold our hand longer and an expeditionary force, under the command of Major-General Beynon, was in consequence recently pushed into the heart of the Mahsud country. The result of these operations was entirely satisfactory and the Mahsuds speedily tendered their complete submission, accepting in full the terms dictated by my Government, even to the extent of surrendering the Government rifles which had fallen into their hands in the course of their previous engagements with our troops and militia—a very real proof of their contrition. I trust the settlement so effected may relieve us from anxiety in this quarter for some time to come. In this connection it would be an ungrateful and ungracious omission on my part were I to fail to express our deep obligations to His Majesty the Amir, whose friendly influence served not only to discourage the Mahsuds, but also to steady the whole situation. Indeed one of the very few happy results of this deplorable world-wide war has been that the ties of friendship between the Afghan Government and ourselves have been drawn closer and our relations with His Majesty the Amir are marked by greater confidence and greater co-operation than ever before. The Mohmands, too, chastened by the rigour of our blockade, have come to their knees and accepted the terms dictated by my Government. Now, although these two elements of discord have been so satisfactorily laid to rest it would be obviously the height of folly to regard the frontier as no longer a potential source of danger, or to relax our vigilance. So long as the disturbing influence of the war continues, so long as enemy agents can find their way into tribal territory, so long as fanatical preachers can play on the feelings of inflammable tribes, the situation must require careful handling and special measures of precaution. It is for this reason that I have been constrained to rule out during the present session of this Council a number of questions touching the administration of the North-West Frontier. The connection between the peoples of the settled districts and their wild neighbours across the border is so intimate, the re-action of feeling between them is so acute that often special measures are necessary to nip incipient trouble in the bud and for the

maintenance of peace on our borders the discussion of such measures in this Council would obviously be out of place at the present time and could only serve to hamper the frontier administration."

A short communique was issued by the Military authorities on the operations which was to the following effect:—On the dispersion of the Waziristan Field Forces, the Commander-in-Chief desires to express to all ranks, his satisfaction at the manner in which the operations against the Mahsuds have been brought to so speedy and successful a termination. This result has been due to the skilful manner in which the operations were conceived and carried out by the generals in commands, to the intimate co-operation between the arms engaged, but above all to the pluck and determination displayed by the troops, combatant and non-combatant, British and Indian, frontier militias and constabulary and our gallant Allies, the Nepalese contingent. There were many obstacles to be overcome in a climate and under conditions of the most trying description, but they were overcome in a manner worthy of the best traditions of the British Army. For the first time the tribesmen on this part of the frontier have felt the power of the Royal Flying Corps which carried out its duties with the dash and daring to which the army has become accustomed.

It gives the Commander-in-Chief great pleasure to associate in this Order the political officers on the staffs of the forces, to whom his thanks are due for the tact and firmness which have so largely contributed to a successful and speedy settlement, and for the generous manner in which they placed their own residence at the disposal of the sick and wounded. The Railway Telegraph, and Postal Departments were subjected to a severe strain, and it was due to their resources and devotion to duty that the requirements of the forces were always met.

In conclusion, the Commander-in-chief, on behalf of the Army, gratefully acknowledges the assistance given by the "Red Cross" and "Comforts for Troops" societies, whose generous efforts did much to alleviate the hardships and ameliorate the trying conditions of a summer campaign on the frontier.

A small honours list was subsequently issued in connection with the expedition which contained the following awards:—

His Majesty the King has been graciously pleased to approve the following immediate rewards for distinguished service in the field with the Waziristan Field Force:—

K.C.I.E.:—Major-General W. G. L. Beynon, C.B., C.I.E., D.S.O., I.E.

Brevet Colonel:— Lieut.-Col. W. E. R. Dickson, C.I.E., R.E.

Brevet Lieut.-Col.:—Temporary Brigadier-General: S. Loch, D.S.O., R.E.

Brevet Lieut.-Colonel:—Major W. W. Bickford, C.I.E., I.A.

As for the nomenclature of the Frontier tribes, the term Pathan is not racial. It is used to denote status, and is generally used of the Frontier tribes and their connections. Furthest to the South, on the borders between the North-West Frontier Province and Baluchistan, are found the Shiranis, who are an Afghan people. Waziristan is inhabited by the Waziris, who have two main branches, the Mahsud Waziris, found in Southern Waziristan, and the Darwesh Khel Waziris, mostly in Northern Waziristan. The latter have two main sections, the Utmanzai and the Ahmadzai, and these again are subdivided into numerous clans. In the Kurram the Turis (who unlike their neighbours are Shiahs) form the strongest element. In the Khyber region the main tribes are the Orakzai and the Afridis, both found in the mountainous country south of the Khyber Pass commonly called Tirah; both are extensively subdivided, the strongest sections of the Orakzai being the Lashkarzai and the Masozai, and of the Afridis the Malik Bin Khel, the Zakka Khel, the Kambar Khel and the Kuki Khel. Between the Khyber Pass and the Kabul River are the Mullagoris, and further south the Mohmands and the Utman Khel. Beyond these are the Yusufzai, who form the bulk of the inhabitants of Swat and Dir. Chitral is inhabited by races whose origin is obscure.

AFGHANISTAN.

The relations of Afghanistan with the Indian Empire are dominated by one main consideration—the relation of Afghanistan to a Russian invasion of India. All other considerations are of secondary importance. For nearly three-quarters of a century the attitude of Great Britain toward successive Amirs has been dictated by this one factor. It was in order to prevent Afghanistan from coming under the influence of Russia that the first Afghan War of 1838 was fought—the most melancholy episode in Indian frontier history. It was because a Russian envoy was received at Kabul whilst the British representative was turned back at Ali Masjid that the Afghan War of 1878 was waged. Since then the whole end of British policy toward Afghanistan has been to build up a strong independent State, friendly to Britain, which would act as a buffer against Russia, and so to order our frontier policy that we should be in a position to move large forces up, if necessary, to support the Afghans in resisting aggression.

Gates to India.

A knowledge of the trans-frontier geography of India brought home to her administrators the conviction that there were only two main gates to India—through Afghanistan, the historic route to India, along which successive invasions have poured, and by way of Seistan. It has been the purpose of British policy to close them, and of Russia to endeavour to keep them at any rate half open. To this end having pushed her trans-Persian railway to Samarkand Russia thrust a military line from Merv to the Kushklinsky Post, where railway material is collected for its immediate prolongation to Herat. Later, she connected the trans-Siberian railway with the trans-Caucasian system, by the Orenburg-Tashkent line, thus bringing Central Asia into direct touch wit-

her European magazines. She was, until recently, credited with the determination to build the Termes railway, which would menace north-east Afghanistan just as the Kushk-linsky line does north-west Afghanistan. Nor has Great Britain been idle. A great military station has been created at Quetta. This is connected with the Indian railway system by lines of railway which climb to the Quetta Plateau by the Bolan Pass and through the Chapper Rift, lines which rank amongst the most picturesque and daring in the world. From Quetta the line has been carried by the Khojak tunnel through the Khwaja Amran Range, until it leads out to the Afghan Border at New Chaman, where it opens on the route to Kandahar. The material is stocked at New Chaman which would enable the line to be carried to Kandahar in sixty days. In view of the same menace the whole of Baluchistan has been brought under British control. Quetta is now one of the great strategical positions of the world, and nothing has been left undone which modern military science can achieve to add to its natural strength. In the opinion of many military authorities it firmly closes the western gate to India, either by way of Kandahar, or the direct route through Seistan.

Further east the Indian railway system has been carried to Jamrud, at the entrance to the Khyber Pass. A first class military road, sometimes double, sometimes treble, threads the Pass to our advanced post at Landi Kotal, and then descends until it meets the Afghan frontier at Tor Khum. Later, a commencement was made with the Loi Shilman Railway, which, starting from Peshawar, was designed to penetrate the Mullagori country and provide an alternative advance to the Khyber for the movement of British troops for the defence of Kabul. For unexplained reasons, this line was suddenly stopped and is now thrust in the air. In this wise the two Powers prepared for the great conflict which was to be fought on the Kandahar-Ghazni-Kabul line.

Relations with India.

Between the advanced posts on either side stands the Kingdom of Afghanistan. The end of British policy has been to make it strong and friendly. In the first particular it has largely succeeded. When the late Abdurrahaman was invited to ascend the throne, as the only means of escape from the tangle of 1879, none realised his great qualities. Previously the Amir of Afghanistan had been the chief of a confederacy of clans. Abdurrahaman made himself master in his own kingdom. By means into which it is not well closely to enter, he beat down opposition until none dared lift a hand against him. Aided by a British subsidy of twelve lakhs of rupees a year, increased to eighteen by the Durand Agreement of 1893, he established a strong standing army and set up arsenals under foreign supervision to furnish it with arms and ammunition. Step by step his position was regularised. The Anglo-Russian Boundary Commission,—which nearly precipitated war over the Penjdeh episode in 1885,—determined the northern boundaries. The Pamirs Agreement delimited the borders amid those snowy heights. The Durand Agreement settled the border on the British side Finally the McMahon award closed the old feud with Persia over the distribution of the waters of the Helmand in Seistan. It was estimated by competent authorities that about the time of Abdurrahaman's death, Afghanistan was in a position to place in the field, in the event of war, one hundred thousand well-armed regular and irregular troops; together with two hundred thousand tribal levies, and to leave fifty thousand regulars and irregulars and a hundred thousand levies to maintain order in Kabul and the provinces. But if Afghanistan were made strong, it was not made friendly. Abdurrahaman Khan distrusted British policy up to the day of his death. All that can be said is that he distrusted it less than he distrusted Russia, and if the occasion had arisen for him to make a choice, he would have opposed a Russian advance with all the force at his disposal. He closed his country absolutely against all foreigners, except those who were necessary for the supervision of his arsenals and factories. He refused to accept a British Resident, on the ground that he could not protect him, and British affairs have been entrusted to an Indian agent, who is in a most equivocal position. At the same time he repeatedly pressed for the right to pass by the Government of India and to establish his own representative at the Court of St. James.

Position To-day.

It used to be one of the commonplaces of Indian discussion that the system which Abdurrahaman Khan had set up would perish with him, because none other was capable of maintaining it. Abdurrahaman Khan died in 1901. His favourite son, Habibullah, who had been gradually initiated into the administration, peacefully succeeded him, and has since peacefully retained his seat on the throne. He concluded in 1905 the Dane Treaty, by which he accepted the same obligations on the same terms as his father. He visited India in 1907, and apparently both enjoyed and profited by his experiences. Since then the purdah which screens Afghanistan has been lifted so little that there is no definite knowledge of what has passed behind it. It would however be impossible to describe the attitude of the Amir as friendly. It is said that the honours bestowed upon him in India, especially the conferring of a Royal Title, increased the megalomania from which all Afghans suffer. He bitterly resented the conclusion of the Anglo-Russian Agreement, without any prior reference to himself, and has never given his adhesion to it over. His attitude toward the Frontier disturbances of 1907-08 was peculiar. There is no doubt that the Zakka Khel rising was stirred by refugees in Kabul. Thousands of Afghans, equipped in Afghan territory, participated in the Mohmand campaign. The great lashkar which attacked Landi Kotal was entirely composed of Afghans. The most favourable interpretation placed on his conduct is that during his absence in India, followed by a long tour in the northern provinces, the situation in Afghanistan had got out of hand, and the Amir let it take its course until failure occurred, when he stepped in and assumed control of affairs. For the rest, the position of the ruler of Afghanistan is not an enviable one. His brother, Nasrullah Khan

a noted Anglophobe and reactionary, is the Commander-in-Chief of the Army and the head of the orthodox party. The administration of the country is extremely lax. Experiences in Khost indicate that the strength of the central power has been exaggerated In 1912, the Mangals of Khost revolted against an unpopular governor and besieged him in his own stronghold. There was much talk of the prompt and severe punishment of the rebels, but the troops never reached the valley and the rebels were bought off by the dismissal of the unpopular governor.

Anglo-Russian Agreement.

Inasmuch as Afghan politics, in their relation to Great Britain, were determined by the Russian menace, they have receded with the conclusion of the Anglo-Russian Agreement. The part of the Anglo-Russian Convention relating to Afghanistan is as follows: I. The British Government disclaims any intention of changing the political position in Afghanistan, and undertakes neither to take measures in Afghanistan, nor to encourage Afghanistan to take measures, threatening Russia. The Russian Government recognises Afghanistan as outside the Russian sphere of influence, and agrees to act in all political relations with Afghanistan through the British Government, and it also undertakes to send no agents to Afghanistan. II. Great Britain adheres to the provisions of the treaty of Kabul of March 21, 1905, and undertakes not to annex or to occupy, contrary to the said treaty, any part of Afghanistan, or to intervene in the internal administration. The reservation is made that the Amir shall fulfil the engagements contracted by him in the aforementioned treaty. III. Russian and Afghan officials especially appointed for that purpose on the frontier, or in the frontier provinces, may enter into direct relations in order to settle local questions of a non-political character. IV. Russia and Great Britain declare that they recognise the principle of equality of treatment for commerce and agree that all facilities acquired already or in the future for British and Anglo-Indian commerce and merchants shall be equally applied to Russian Commerce and merchants. V. These arrangements are not to come into force until Great Britain has notified to Russia the Amir's assent to them.

The Amir has never given his adhesion to the Agreement; but Great Britain and Russia have agreed to regard the Agreement as if the Amir had accepted it.

On the outbreak of the war His Majesty the Amir declared his complete neutrality, and this policy was pursued during the year in circumstances of great difficulty.

TIBET.

Recent British policy in Tibet is really another phase in the long-drawn-out duel between Great Britain and Russia in Central Asia. The earliest efforts to establish communication with that country were not, of course, inspired by this apprehension. When in 1774 Warren Hastings despatched Bogle on a mission to the Tashi-Lama of Shigatse,—the spiritual equal, if not superior, of the Dalai Lama of Lhasa—his desire was to establish facilities for trade, to open up friendly relations with a Power which was giving us trouble on the frontier, and gradually to pave the way to a good understanding between the two countries. After Warren Hasting's departure from India the subject slept, and the last Englishman to visit Lhasa, until the Younghusband Expedition of 1904, was the unofficial Manning. In 1885, under the inspiration of Colman Macaulay, of the Bengal Civil Service, a further attempt was made to get into touch with the Tibetans, but it was abandoned in deference to the opposition of the Chinese, whose suzerainty over Tibet was recognised, and to whose views until the war with Japan, British statesmen were inclined to pay excessive deference. But the position on the Tibetan frontier continued to be most unsatisfactory. The Tibetans were aggressive and obstructive, and with a view to putting an end to an intolerable situation, a Convention was negotiated between Great Britain and China in 1890. This laid down the boundary between Sikkim and Tibet, it admitted a British protectorate over Sikkim, and paved the way for arrangements for the conduct of trade across the Sikkim-Tibet frontier. These supplementary arrangements provided for the opening of a trade mart at Yatung, on the Tibetan side of the frontier, to which British subjects should have the right of free access, and where there should be no restrictions on trade. The agreement proved useless in practice, because the Tibetans refused to recognise it, and despite their established suzerainty, the Chinese Government were unable to secure respect for it.

Russian Intervention.

This was the position when in 1899 Lord Curzon, Viceroy of India, endeavoured to get into direct touch with the Tibetan authorities. Three letters which he addressed to the Dalai Lama were returned unopened, at a time when the Dalai Lama was in direct intercourse with the Tsar of Russia. His emissary was a Siberian Dorjieff, who had established a remarkable ascendancy in the counsels of the Dalai Lama. After a few years' residence at Lhasa Dorjieff went to Russia on a confidential mission in 1899. At the end of 1900 he returned to Russia at the head of a Tibetan mission, of which the head was officially described in Russia as "the senior Tsanite Khomba attached to the Dalai Lama of Tibet." This mission arrived at Odessa in October 1900, and was received in audience by the Tsar at Livadia. Dorjieff returned to Lhasa to report progress, and in 1901 was at St. Petersburg with a Tibetan mission, where as bearers of an autograph letter from the Dalai Lama they were received by the Tsar at Peterhoff. They were escorted home through Central Asia by a Russian force to which several Intelligence Officers were attached. At the time it was rumoured that Dorjieff had, on behalf of the Dalai Lama, concluded a treaty with Russia, which virtually placed Tibet under the protectorate of Russia. This rumour was afterwards officially contradicted by the Russian Government.

The Expedition of 1904.

In view of these conditions the Government of India, treating the idea of Chinese suzerainty over Tibet as a constitutional fiction, proposed in 1903 to despatch a mission, with an armed escort, to Lhasa to discuss the outstanding questions with the Tibetan authorities on the spot. To this the Home Government could not assent, but agreed, in conjunction with the Chinese Government, to a joint meeting at Khamba Jong, on the Tibetan side of the frontier. Sir Francis Younghusband was the British representative, but after months of delay it was ascertained that the Tibetans had no intention of committing themselves. It was therefore agreed that the mission, with a strong escort, should move to Gyantse. On the way the Tibetans developed marked hostility, and there was fighting at Tuna, and several sharp encounters in and around Gyantse. It was therefore decided that the mission should advance to Lhasa, and on August 3rd, 1904, Lhasa was reached. There Sir Francis Younghusband negotiated a convention by which the Tibetans agreed to respect the Chinese Convention of 1890; to open trade marts at Gyantse, Gartok and Yatung; to pay an indemnity of £500,000 (seventy-five lakhs of rupees); the British to remain in occupation of the Chumbi Valley until this indemnity was paid off at the rate of a lakh of rupees a year. In a separate instrument the Tibetans agreed that the British Trade Agent at Gyantse should have the right to proceed to Lhasa to discuss commercial questions, if necessary.

Home Government intervenes.

For reasons which were not apparent at the time, but which have since been made clearer, the Home Government were unable to accept the full terms of this agreement. The indemnity was reduced from seventy-five lakhs of rupees to twenty-five lakhs, to be paid off in three years, and the occupation of the Chumbi Valley was reduced to that period. The right to despatch the British Trade Agent to Lhasa was withdrawn. Two years later (June 1906) a Convention was concluded between Great Britain and China regulating the position in Tibet. Under this Convention Great Britain agreed neither to annex Tibetan territory, nor to interfere in the internal administration of Tibet. China undertook not to permit any other foreign State to interfere with the territory or internal administration of Tibet. Great Britain was empowered to lay down telegraph lines to connect the trade stations with India, and it was provided that the provisions of the Convention of 1890, and the Trade Regulations of 1893, remained in force. The Chinese Government paid the indemnity in three years and the Chumbi Valley was evacuated. The only direct result of the Mission was the opening of the three trade marts and the establishment of a British Trade Agent at Gyantse.

The Anglo-Russian Agreement.

The reason underlying the action of the British Government in modifying, in such material particulars, the Convention of Lhasa was apparent later. The Anglo-Russian Agreement was in process of negotiation, and under that Agreement Great Britain was pledging herself not to annex any portion of Tibetan territory, nor to send a representative to Lhasa. A seventy-five year occupation of the Chumbi Valley would have been indistinguishable from annexation. The portions of the Anglo-Russian Agreement which relate to Tibet are as follows.

Article I.—The two High Contracting Parties engage to respect the territorial integrity of Tibet and to abstain from all interference in its internal administration.

Article II.—In accordance with the admitted principle of the suzerainty of China over Tibet, Great Britain and Russia engage not to enter into negotiations with Tibet, except through the intermediary of the Chinese Government. This engagement does not exclude the direct relations between the British Commercial Agents and the Tibetan authorities, provided for in Article V of the Convention between Great Britain and Tibet of the 7th September, 1904, and confirmed by the Convention between Great Britain and China of the 27th April 1906; nor does it modify the engagements entered into by Great Britain and China in Article I of the said Convention of 1906.

It is clearly understood that Buddhists, subjects of Great Britain or of Russia, may enter into direct relations on strictly religious matters with the Dalai Lama, and the other representatives of Buddhism in Tibet; the Governments of Great Britain and Russia engage, as far as they are concerned, not to allow those relations to infringe the stipulations of the present arrangement.

Article III.—The British and Russian Governments, respectively, engage not to send Representatives to Lhasa.

Article IV.—The two High Contracting Parties engage neither to seek nor to obtain, whether for themselves or for their subjects any concessions for railways, roads, telegraphs and mines, or other rights in Tibet.

Article V.—The two Governments agree that no part of the revenues of Tibet, whether in kind or in cash, shall be pledged or assigned to Great Britain or Russia or to any of their subjects.

Annexed to the Agreement was a re-affirmation of the declaration for the evacuation of the Chumbi Valley after the payment of three annual instalments of the indemnity, provided that the trade marts had been effectively opened for three years and that the Tibetans had complied in all respects with the terms of the Treaty.

Chinese Action.

The sequel to the Anglo-Russian Agreement was dramatic, although it ought not to have been unexpected. On the approach of the Younghusband Mission the Dalai Lama fled to Urga, the sacred city of the Buddhists in Mongolia. He left the internal government of Tibet in confusion, and one of Sir Francis Younghusband's great difficulties was to find Tibetan officials who would undertake the responsibility of signing the Treaty. Now the suzerainty of China over Tibet had been explicitly reaffirmed. It was asserted that she would be held responsible for the foreign relations of Tibet. In the past this suzerainty having been a "constitutional fiction," it was

inevitable that China should take steps to see that she had the power to make her will respected at Lhasa. To this end she proceeded to convert Tibet from a vassal state into a province of China. In 1908 Chao Erh-feng, acting Viceroy in the neighbouring province of Szechuen, was appointed Resident in Tibet. He proceeded gradually to establish his authority, marching through Eastern Tibet and treating the people with great severity. Meantime the Dalai Lama, finding his presence at Urga, the seat of another Buddhist Pontiff, irksome, had taken refuge in Si-ning. Thence he proceeded to Peking, where he arrived in 1908, was received by the Court, and despatched to resume his duties at Lhasa. Moving by leisured stages, he arrived there at Christmas 1909. But it was soon apparent that the ideas of the Dalai Lama and of the Chinese Government had little in common. The Dalai Lama expected to resume the temporal and spiritual despotism which he had exercised prior to 1904. The Chinese intended to deprive him of all temporal power and preserve him as a spiritual pope. The Tibetans had already been exasperated by the pressure of the Chinese soldiery. The report that a strong Chinese force was moving on Lhasa so alarmed the Dalai Lama that he fled from Lhasa, and by the irony of fate sought a refuge in India. He was chased to the frontier by Chinese troops, and took up his abode in Darjeeling, whilst Chinese troops overran Tibet.

Later Stages.

The British Government, acting on the representations of the Government of India, made strong protests to China against this action. They pointed out that Great Britain, while disclaiming any desire to interfere with the internal administration of Tibet, could not be indifferent to disturbances in the peace of a country which was a neighbour, on intimate terms with other neighbouring States on our frontier, especially with Nepal, and pressed that an effective Tibetan Government be maintained. The attitude of the Chinese Government was that no more troops had been sent to Tibet than were necessary for the preservation of order, that China had no intention of converting Tibet into a province, but that being responsible for the good conduct of Tibet, she must be in a position to see that her wishes were respected by the Tibetans. Finally, the Chinese remarked that the Dalai Lama was such an impossible person that they had been compelled again to depose him. Here the matter might have rested, but for the revolution in China. That revolution broke out in Szechuen, and one of the first victims was Chao Erh-feng. Cut off from all support from China, surrounded by a hostile and infuriated populace, the Chinese troops in Tibet were in a hopeless case; they surrendered, and sought escape not through China, but through India, by way of Darjeeling and Calcutta. The Dalai Lama returned to Lhasa, and in 1913, in the House of Lords on July 28, Lord Morley stated the policy of the British Government in relation to these changes. He said the declaration of the President of the Chinese Republic saying that Tibet came within the sphere of Chinese internal administration; and that Tibet was to be regarded as on an equal footing with other provinces of China, was met by a very vigorous protest from the British Government. The Chinese Government subsequently accepted the principle that China is to have no right of active intervention in the internal administration of Tibet, and agreed to the constitution of a conference to discuss the relation of the three countries. This Convention met at Simla when Sir Henry McMahon, Foreign Secretary to the Government of India; Mr. Ivan Chen, representing China: and Mr. Long Chen Shatra, Prime Minister to the Dalai Lama, threshed out these issues. Whilst no official pronouncement has been made on the subject, it is understood that a Convention was initialled in June which recognised the complete autonomy of Tibet proper, with the right of China to maintain a Resident at Lhasa with a suitable guard. A semi-autonomous zone was to be constituted in Eastern Tibet, in which the Chinese position was to be relatively much stronger. But this Convention, it is understood, has not been ratified by the Chinese Government, owing to the difficulty of defining Outer and Inner Tibet.

Political Importance of Tibet.

The political importance of Tibet in relation to India has of necessity been changed by the Anglo-Russian Agreement. So long as that instrument is in force, it tends to decline. But no treaties are everlasting. The question has been admirably summed up by Sir Valentine Chirol ("The Middle Eastern Question"), written before the Agreement was reached. "What it would be impossible to view without some concern," he wrote, "would be the ascendance of a foreign and possibly hostile power at Lhasa, controlling the policy of a great politico-religious organisation whose influence can and does make itself appreciably felt all along the north-eastern borderland of India. Lhasa is the stronghold of Lamastic Buddhism, a debased form of Buddhism largely overgrown with tantric philosophy—Lhasa is in fact the Rome of Central Asian Buddhism, and the many-storied Potala on the hill to the west of the city is its Vatican, whence its influence radiates throughout innumerable lamaseries or Buddhist monasteries, not only into Turkestan and Mongolia and Western China, but across the Himalayas into the frontier States of our Indian Empire. Corrupt and degraded as it is, it is still unquestionably a power, and just because it is corrupt and degraded it might lend itself more readily to become for a consideration the tool of Russian ambitions.....Tibet as a Russian dependency would, at any rate no longer be a *quantité negligeable*, and our north-eastern frontier, naturally formidable as it is, would require to be watched, just as every civilised country has to watch its frontiers, whatever they may be, where they march with a powerful neighbour, and most of all in India, where our frontier is fringed with semi-independent Native States, over which our authority is conditioned mainly on the hitherto unrivalled prestige of our Imperial power in Asia."

British Trade Agent, Yatung—D. Macdonald.

British Trade Agent, Gyantse.—Major W. L. Campbell.

THE NORTH-EASTERN FRONTIER.

The position on the northern frontier has been considered as if the British line were contiguous with that of Tibet. This is not so. The real frontier States are Kashmir, Nepal, Sikkim and Bhutan. From Chitral to Gilgit, now the northernmost posts of the Indian Government, to Assam, with the exception of the small wedge between Kashmir and Nepal, where the British district of Kumaon is thrust right up to the confines of Tibet, for a distance of nearly fifteen hundred miles there is a narrow strip of native territory between British India and the true frontier. The first of these frontier States is Kashmir. The characteristics of this State are considered under Native States (*q.v.*); it is almost the only important Native State in India with frontier responsibilities, and it worthily discharges them through the agency of its efficient Imperial Service troops—four regiments of infantry and two Mountain Batteries, composed mainly of the Rajput Dogras, who make excellent fighting material. One of the most important trade routes with Tibet passes through Kashmir—that through Ladak. Then we come to the long narrow strip of Nepal. This Gurkha State stands in special relations with the British Government. It is for all practical purposes independent, and the British resident at Khatmandu exercises no influence on the internal administration. The governing machine in Nepal is also peculiar. The Maharaj Dhiraj, who comes from the Sesodia Rajput clan, the bluest blood in India, takes no part in the administration. All power vests in the Prime Minister, who occupies a place equivalent to that of the Mayors of the Palace, or the Shoguns of Japan. The present Prime Minister, Sir Chandra Shamsher, has visited England, and has given conspicuous evidence of his attachment to the British Government. Nepal is the main Indian outpost against Tibet, or against Chinese aggression through Tibet. The friction between the Chinese and the Nepalese used to be frequent, and in the eighteenth century the Chinese marched an army to the confines of Khatmandu—one of the most remarkable military achievements in the history of Asia. Under the firm rule of the present Prime Minister Nepal has been largely free from internal disturbance, and has been raised to a strong bulwark of India. Nepal is the recruiting ground for the Gurkha Infantry, who form such a splendid part of the fighting arm of the Indian Empire. Beyond Nepal are the smaller States of BHUTAN and SIKKIM, whose rulers are Mongolian by extraction and Buddhists by religion. In view of Chinese aggressions in Tibet, the Government of India in 1910 strengthened their relations with Bhutan by increasing their subsidy from fifty thousand to a lakh of rupees a year, and taking a guarantee that Bhutan would be guided by them in its foreign relations. Afterwards China had officially notified that Great Britain would protect the rights and interests of these States.

Assam and Burma.

We then come to the Assam border tribes—the Daflas, the Miris, the Abors and the Mishmis. Excepting the Abors none of these tribes have recently given trouble. The murder of Mr. Williamson and Dr. Gregorson by the Minyong Abors in 1911 made necessary an expedition to the Dihang valley of the Abor country on the N. E. frontier. A force of 2,500 and about 400 military police was employed from October 1911 to April 1912 in subduing the tribe. After two or three small actions the murderers were delivered up. The cost of the expedition was Rs. 21,60,000. At the same time friendly missions were sent to the Mishmi and Miri countries. Close contact with these forest-clad and leech-infested hills has not encouraged any desire to establish more intimate relations with them. The area occupied by the Nagasares runs northwards from Manipur. The Nagasares a Tibeto-Burman people, devoted to the practice of head hunting, which is still vigorously prosecuted by the independent tribes. The Chin Hills is a tract of mountainous country to the south of Manipur. The corner of India from the Assam boundary to the northern boundary of the Shan States is for the most part included in the Myitkyina and Bhamo districts of Burma. Over the greater part of this area, a labyrinth of hills in the north, no direct administrative control is at present exercised. It is peopled by the Shans and the Kachins. Civilisation is said to be progressing and steps have been taken to prevent encroachments from the Chinese side. There is a considerable trade with China through Bhamo. On the Eastern frontier of Burma are the Shan States, with an area of fifty thousand square miles and a population of 1,800,000. These States are still administered by the Sawbwas or hereditary chiefs, subject to the guidance of Superintendents and Assistant Superintendents. The Northern Shan Railway to Lashio, opened in 1903, was meant to be a stage in the construction of a direct railway link with China, but this idea has been put aside, for it is seen that there can never be a trade which would justify the heavy expenditure. The Southern Shan States are being developed by railway connection. The five Karenni States lie on the frontier south of the Shan States. South of Karenni the frontier runs between Siam and the Tenasserim Division of Burma. The relations between the Indian Government and the progressive kingdom of Siam are excellent.

Unrest, which had been brewing for some time among the Kachins, came to a head in December 1914 and January 1915, when punitive operations were undertaken. The columns originally consisted of Burma Military Police, but as the disturbance appeared more general and likely to spread, regular troops were ordered up to Myitkyina. In the Kamaing and Mogaung Jurisdictions, and the adjoining unadministered territory, six columns operated during January and February. The slight opposition encountered was in all cases successfully overcome, the rebel stockades captured and the implicated villages destroyed.

Railways to India.

The prospect of linking Europe and Asia by a railway running eastwards through Asia Minor has fascinated men's minds for generations. The plans suggested have, owing to the British connection with India, always lain in the direction of lines approaching India. More than 40 years ago a Select Committee of the House of Commons sat for two years to consider the question of a Euphrates Valley railway. The Shah of Persia applied to the British Foreign Office for the investment of British capital in Persian railway construction many years before the end of the nineteenth century. A proposal was put forward in 1895 for a line of 1,000 miles from Cairo and Port Said to Koweit, at the head of the Persian Gulf. While these projects were in the air, German enterprise stepped in and made a small beginning by constructing the Anatolian railway system. Its lines start from Scutari, on the southern shore of the Bosphorus, opposite Constantinople, and serve the extreme western end of Asia Minor. And upon this foundation was based the Turkish concession to Germans to build the Baghdad Railway.

Meanwhile, Russia was pushing her railways from various directions into the Central Asian territory running along the northern frontiers of Persia and Afghanistan to the borders of Chinese Turkestan. The advance of the Russian railheads was regarded with extreme suspicion in England as part of a scheme of adventure against India, and as the Russian lines crept southwards British Indian railways were thrust forward to the Indian north-west frontier. As the two systems approached one another, enthusiasts adumbrated plans for linking them together. M. de Lesseps, the creator of the Suez Canal, made a journey to Bombay to lay one before the Indian Government. He was proposing to start homewards through Afghanistan and Central Asia, so that he might examine a route that way, and *via* Orenburg to Moscow, when the Afghan wars broke out and ended his dream.

The construction of a Trans-Persian railway, connecting India, across Persia, with the Russian lines between the Black Sea and the Caspian Sea has come to the forefront since the conclusion of the Anglo-Russian agreement regarding Persia, and simultaneously with this and the advance of the Baghdad railway old projects for British lines running inland into Persia from the Persian Gulf have been quickened.

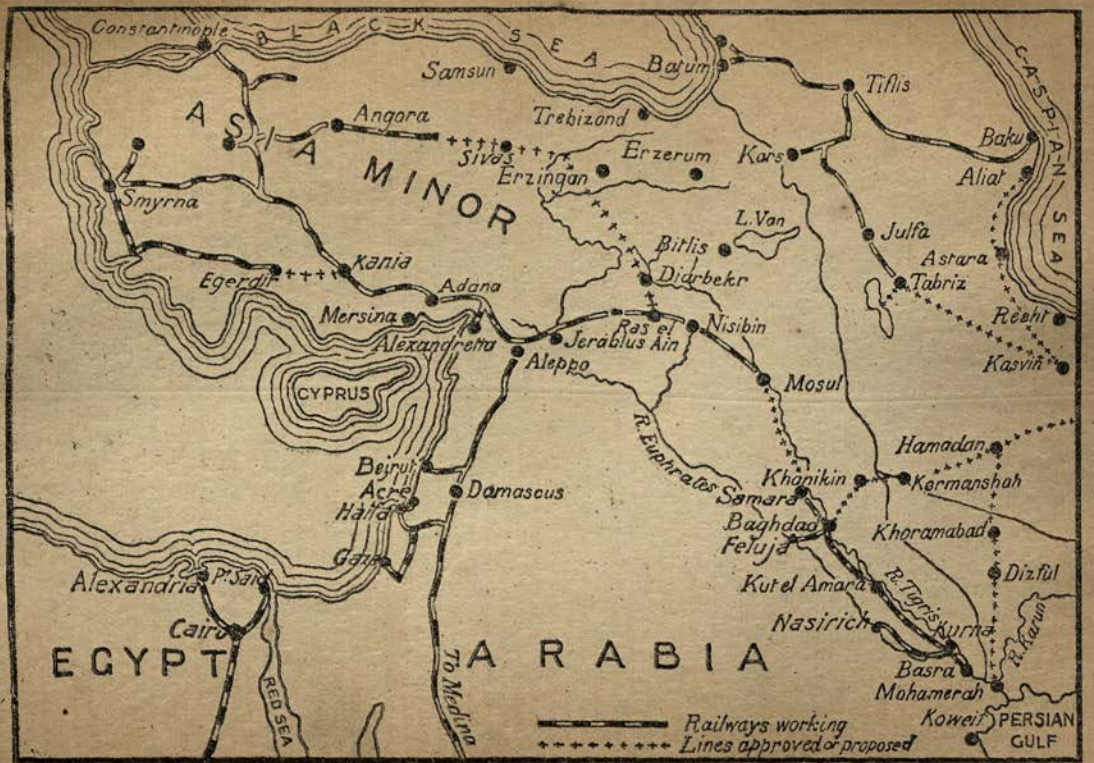
The actual position in regard to these various undertakings up to the outbreak of the European war and, so far as can be ascertained, since then, is as follows:—

Baghdad Railway.

The German group holding the Anatolian railway concession was granted, in 1902, a further concession for extending that system from Konia, then its southern terminus, through the Taurus range to the extreme eastern Mediterranean seaboard, and by way of Nisibin, Mosul and Baghdad to Basra. This concession was substituted for a line projected by a more northerly route through the pass of Diarbekr, Russia strongly objected to that route, on the ground that it would bring the line into the Black Sea basin. When it was abandoned, a Russo-Turkish agreement was passed; reserving to Russia the sole right to construct railways in the northern part of Asia Minor, and Russia has since then prepared a number of projects for that region, branching out from Samsun, on the Black Sea. Russia has also prepared her Caucasian railways for possible extensions in the same region, pushing her lines towards Van and making an agreement with Persia, in February, 1913, for a line to Lake Urumia, which was completed in the early part of 1917.

The Anatolian railway company were apparently unable to handle their new concession and initiated fresh negotiations, which resulted in the Baghdad Railway convention of March, 1903. This caused much discussion in England, owing to the apparent intention of the Germans to encroach on the Persian Gulf. Attempts were made by the German group to secure the participation of France and Britain in the undertaking. They were successful in France, the Imperial Ottoman Bank group agreeing to take 30 per cent. of the finance, without, however, the countenance of the French Government. But in England, though Mr. Balfour's Government was favourable, strong objection was taken to the constitution of the Board of Directors, which established German control in perpetuity. It was regarded as a German political move and participation was rejected.

The financial terms, with a Turkish kilometric guarantee, were highly favourable to the company. Thus, the outside cost of construction of the first section, which lies entirely in the plains of Konia, is estimated to have been £625,000, and the company retained a profit of at least 1¼ millions sterling on this part of their enterprise. In the second section the Taurus range was encountered and construction was more difficult and more costly. The railway must for a long time be a heavy burden on Turkish finance. The country through which it passes from the Mediterranean seaboard to the Tigris valley above Baghdad holds out little or no prospect of commercial advantage, and the financial system adopted offers no inducement to the concessionaires to work for increasing earnings. Thus, the Baghdad railway company sublet the working of the line to the Anatolian Railway Company at a rate of £148 per kilometre, as against £180 per kilometre guaranteed by the Turkish Government. The weight of the Turkish obligations in connection with the railway had an important effect upon the discussions, in Paris in the summer of 1913, of the international committee for the examination of questions relating to the Ottoman Debt. The committee was appointed in reference to the financial settlement between Turkey and the Balkan States after the war and it became evident that for some Powers, whatever the deserts of the Balkan Allies might be, the Baghdad railway and Turkey's ability to pay the guarantee upon it were the one fixed point to be guarded in the Ottoman Empire. Important negotiations took place between Germany and France, in 1913, to regulate their respective financial positions in regard to the railway, so as to avoid future conflict of pol-



It is reported from Sofia, as we go to press, that the tunnels through the Taurus Mtns., N. W. of Adana, had been completed by November.

tical interests in the regions of the Baghdad lines and the French railway system in Syria.

The Baghdad Railway was during 1913 advanced southward from Konia 182 miles, to Karapunar, on the northern slope of the Taurus. On the southern side of the mountains, the Mersina-Adana line had been incorporated and 16 miles of track constructed, from Adana to Dorak, among the southern foothills of the Taurus. Work then proceeded to link up Karapunar and Dorak. The distance between them through the mountains is 56 miles. The limestone mountain gorges involved much tunnel work and it was estimated that the work would occupy three years. During the first two years of the war the tunnelling had not been completed, but the gap in the railway was overcome by the construction of a motor road over the pass, with an efficient motor service upon it. It was reported from Sofia in November 1916 that the tunnelling had been completed and opened for traffic.

Eastward from Adana, construction advanced throughout 1913, towards the head of the French Syrian lines at Aleppo, and work was begun on a short branch line connecting this new piece with Alexandretta. The branch was opened to traffic early in 1914. The Germans submitted plans to the Turkish Government in 1913 for the construction of a new port at Alexandretta, in accordance with the terms of a supplementary concession sanctioning the branch line. These included the construction of three docks, a feature of considerable interest. Work was begun early in 1913 on a line running north-west from Aleppo to meet that coming from Adana. It had to pierce the Amanus range of hills by a tunnel three miles long, which, it was estimated, would take three years to construct. Here, as on the Taurus range, the break in the line was at first overcome by building a road and establishing a motor car service upon it, but there is reason to believe that the railway has long since been completed and in use.

So far from the war having stopped work on any section of the railway, it has, for military considerations, led to its being pushed forward with increased energy.

Progress has meanwhile been made with important stages of the line running north-east from Aleppo en route to Baghdad. This line was in 1913 open to Jerablus, on the Euphrates and the construction of a large bridge at that spot was immediately undertaken, while motor boats and a steamer or two were taken in pieces to Jerablus and launched for river traffic to Baghdad. The journey from Beirut to Baghdad was thus reduced to 8½ days, counting two days from Beirut to Jerablus by train, six days by steamer to Feluja, and finally, 10 hours' carriage drive to Baghdad. The river traffic is likely to be interrupted in the dry season. The Jerablus bridge having been completed, the railway was completed and opened on July 1st, 1914, as far as Tel Abaid, 60 miles east of Jerablus. Earthwork had already been carried much farther. It was reported in the summer of 1915 that 40 miles of line eastward from Tel Abaid had been opened. Trustworthy reports in the autumn of 1916 stated that the line had certainly been completed as far as Nisibin and probably as far as Mosul. Whether the line has yet been carried to Mosul and perhaps beyond it cannot be stated.

Construction was, before the war, being carried on on the Baghdad-Mosul section, material for the latter being taken up-river from Basra to Baghdad by special barges and tugs. The line from Baghdad to Sumike about 40 miles north of Baghdad, was handed over for traffic on June 2nd, 1914, and it was reported in 1915 that another 80 miles on this portion of the railway had been completed taking the rails as far as Samara. This was the railhead when General Maude's victorious army captured Baghdad and progressed to railway limits. Reckoning on the sections completed and open for traffic, a distance of nearly 600 miles had been finished by the summer of 1914 out of a total of 1,020 miles, reckoning from Konia to Baghdad. An official Deutsche Bank report issued in March, 1914, stated that the Balkan wars had caused the German undertaking "to concentrate its Turkish enterprises more than ever upon the Asiatic territories." To this end the Germans handed over their Balkan railway interests to an Austro-Hungarian financial group "on favourable terms," and thus greatly facilitated their special direction of effort in Asia Minor and Mesopotamia. According to Mehrmanu's "Diplomatischer Krieg in Vorder Asien", published in 1916, some 50 miles of a railway from Angora to Sivas and Erzerum and Kharput were completed by November of that year and further work has doubtless been carried out in this part of the country.

An agreement was reached in 1914 between Britain and Turkey, with the acquiescence of Germany, regarding the approach to the Persian Gulf. Its central provision was that the railway should not proceed beyond Basra without an agreement with Britain and Britain waived any question of her participation in the Baghdad-Basra section of the line. It was agreed that there should be no differential rates on the railway, and in regard to the latter Britain obtained the right of appointing two directors of the railway, not for purposes of control but to guard British interests. Britain recognised Turkish suzerainty over Koweit and Turkey recognised the independence of the Sheikh of Koweit and the continuance, unimpaired, of the existing relationship between him and the British Government. The Anglo-Turkish Agreement has not yet been published but Sir Edward Grey announced in 1914 that "we get recognition by Turkey of the *status quo* in the Persian Gulf, the *status quo* as we have regarded it for years past." (House of Commons, June 29, 1914). A statement issued in Berlin on June 15, 1914, stated, "The Anglo-German Agreement regarding the Baghdad Railway and Mesopotamia has been initialled in London by Sir Edward Grey and Prince Lichnowsky, the German Ambassador. A complete understanding has been reached on all questions at issue. The agreement will not come into force until after the conclusion of the negotiations with Turkey, as on some material points the assent of the Porte will be necessary. The contents of the Agree-

Map of the Trans-Persian Railway.

ment can, therefore, not be divulged at present." The war has altered the whole situation. In particular the British military authorities have built lines running northward from Basra, the main one running *via* Kurna and serving Baghdad and a branch of it reaching from Kurna to *Nasiriyeh*.

Germany also proposed to build a line from Baghdad to Khanikin where a pass through the mountains leads into the West Persian highlands. Russia had agreed to build a railway from Khanikin, *via* Kermanshah and Hamadan to Teheran, construction to begin within two years of the completion of the extension from Baghdad to Khanikin and then to be completed in 4 years.

Trans-Persian Line.

A trans-Persian line to join the Russian Caucasian system with the Indian Railways first assumed proportions of practical importance in the late winter of 1911. Both the Russian and the Indian railways are fully developed up to the points which would be the termini of a trans-Persian line and the following details carry us up to the period of the war. The Russian railway system reaches Julfa on the Russo-Persian border between the Black Sea and the Caspian Sea. A line connecting with this runs from Batum, on the east coast of the Black Sea, to Baku on the west coast of the Caspian. Incidentally, article 59 of the Treaty of Berlin provides that Batum shall be "a free port essentially commercial." The Persian Foreign Minister on February 6, 1913, signed a concession to the Russian Julfa-Tabriz and Enzeli-Teheran Road Companies, giving the right to construct a railway from Julfa to Tabriz (93 miles) with an extension to Lake Urumiah and a preferential right to build a railway from Tabriz to Kazvin. Julfa and Tabriz were at that time equipped with a metalled road, on which a motor omnibus service was maintained. The road was the property of the concessionaire company, so that sections of it could conveniently be utilised for railway construction. The work of constructing the line was thus expedited and the line was opened early in 1915. Eight years is fixed as the time limit for the extension of the line from Tabriz to Kazvin, a further distance of 250 miles. The concession runs for a period of seventy-five years. Option is reserved to the Persian Government to purchase the Julfa-Tabriz line after a lapse of 35 years. The Russian Government Department of Railways in June 1913, approved a concession to a Russian Syndicate for the construction of the line from a point on the railway close to Baku to Astara, a point on the Caspian south-western seaboard, where the Russian and Persian territories meet. More than one possible starting point for the trans-Persian Railway is therefore in course of preparation.

On the Indian side, the railway system is fully developed up to Baluchistan, close to the Persian frontier. A broad gauge line running through Quetta to Nushki was constructed with the intention of its development for the benefit of trade which already runs by caravan along the "Nushki trade route" to the Persian province of Seistan. The Russian Government favoured linking up the trans-Persian railway with the Indian railways at this point. But the suspicious saw a strategical reason for this preference. The Indian Government found itself unable to approve the connection. They insist that the line shall run either from Yezd or Kerman to the seaboard. This condition is absolute. There remains, then, a connection with the Indian North-Western Railway at or near Karachi.

The necessary financial arrangements for the preliminary work in connection with the proposal, which came from Russia, to connect the railways with Russia and India were completed in January, 1912. It was then stated that the Russian Committee were already in possession of a nearly complete survey of more than 300 miles from Astara to Teheran and the length of the line from there to Gwadur on the Perso-Baluch Frontier is some 1,200 miles. Soon after this announcement, Mr. Johns was appointed by the Government of India to survey a railway route between Karachi and Gwadur, and found a good line with a general gradient of 1 in 250, the steepest being 1 in 90. Twelve of the principal Russian Banks were interested in the project and the desired amount of English and French capital was guaranteed, one English banking house having even offered to furnish the whole of the English quota. The French concerns are the Banque de Paris et des Pays Bas, the Credit Lyonnais, the Societe Generale, the Comptoir National, the Banque de l'Union Parisienne and Count d' Arnaux.

Meetings of the international financiers concerned in the scheme were held and a Societe d'Etudes was formed. M. G. Raindri, formerly a distinguished member of the French diplomatic service, was selected as President, with Sir William Garstin as British Vice-President and M. Homiakoff, ex-President of the Russian Duma, as Russian Vice-President. The Society consists of a council of administration of 24 persons. The Governments of all three countries gave their approval to the enterprise and on the firm representations of the British Foreign Office a formal memorandum was drawn up providing for absolute equality of British, Russian and French control in the undertaking. It was agreed that in the northern half Russian interest should be 60 per cent., French interest 33 1-3 per cent. and British 6 2-3 per cent., and in the southern half Russian interest 6 2-3 per cent., French 33 1-3 per cent., and British 60 per cent. The total interests of the parties in the whole line would thus be equal. The French and Russian proposal was that interests should be equal for the whole line. The above arrangement was made to meet British susceptibilities.

No announcement has yet been made of the settlement of further details in regard to the line. Its general route will presumably be from Astara *via* Teheran to Kerman or Yezd, and thence to either Bunder Abbas, at the entrance of the Persian Gulf, or Chabar, a point on the Mekran Coast, about 100 miles west of Gwadur. As to the cost, £18,700,000 was the amount first declared by Russian experts as sufficient to cover the cost of construction and provision of rolling-stock for the 1,400 miles of railway in Persian territory. English experts then believed that £15,000,000 would

be sufficient. Further investigation has led competent experts on the English side to say that the capital involved must eventually total £30,000,000 at least. The line presents no great engineering difficulties, but there would be a great variety of gradients throughout its length, the line will rise at several points to some thousands of feet above sea-level, and numerous detours will be necessary both for gradients and to serve local needs.

Central Asian Lines.

There remains the possibility of linking up the Russian and Indian railway systems by way of Afghanistan. But many strategical objections have been raised to the trans-Persian railway and these considerations are strengthened tenfold in regard to bringing the Russian Central Asian lines nearer Kabul. Russia has in recent years considerably increased her railway facilities in Central Asia. The line from Krasnavodsk on the East Caspian shore now extends, *via* Merv and Bokhara and Samarkhand, to Andijan, which is some 350 miles north-west of Kashgar, the important town of Chinese Turkestan. The great network of railways in European Russia is also now directly connected by the Orenburg line with Tashkent, and a connecting line links it up with the southern railway just described. From Merv a line runs south to Kushk, on the Afghan border, within a few miles of Herat. It is reported that Russia intends building another line extending the Orenburg-Tashkent connection to Termes, a point on the Oxus 50 miles or less from Balkh, which, again, is close to the important strategical point, Mazari-Sharif. It is doubtful whether in a race, Russia, starting from Termes, or Britain, starting from the Khyber, could reach Kabul first. Termes, where, it is stated, Russia proposes to throw a bridge across the Oxus, is the highest point at which that river is navigable from the Aral Sea. The suggestion has often seriously been made in recent years that the Russian line from Merv to Herat should be linked to the Indian line which from Quetta proceeds to the Afghan border at Chaman. The distance between the two railheads is about 520 miles.

Persian Gulf Lines.

Britain's special interests in regard to Persian railways have hitherto primarily been associated with lines running inland from the Persian Gulf, to supersede the old mule routes. Special importance has for many years been attached to schemes for a railway from Mohammerah (at the opening of the Karun Valley, where the Karun River runs into the Shat-el-Arab, just below Basra, near the Turkish border), northwards into the rich highland country of Western Persia. Britain has long established special relations with the Karun Valley and has a large trade there. An agreement was reached between the Persian Government and the representative of a British Syndicate in February, 1913, for the construction of a railway from Mohammerah to Khoramabad, in the interior Persia offered the syndicate a two years' option, during which period the route of the line was to be surveyed. The Persian Government undertook to decide, on the completion of the survey, whether it would build the railway as a State line under contract with the Syndicate, or whether it would grant the Syndicate a concession for the construction of the line. The Syndicate immediately began preliminary operations. Four English engineers were sent out, and exactly two months after the agreement was announced they proceeded to Dizful, on the route of the line, for the purpose of making preliminary surveys. The Syndicate is composed of six groups, of which four are already connected with Persian commerce, *viz.*, the Anglo-Persian Oil Company, the Imperial Bank, the Euphrates and Tigris Steam Navigation Company (Messrs. Lynch), and the British India Steam Navigation Company. The Syndicate is prepared to undertake much more extensive railway construction in Southern Persia. As Russia will eventually build a line from Teheran to Khanikin, the Khoramabad line will probably be linked with this line, at Hamadan or elsewhere, and Persia will thus have two routes from the Gulf to the north. The latest reports stated that the survey work on the Mohammerah-Khoramabad line was "hung up" owing to the disturbed state of the Luristan tribes around Dizful. The Persian Government agreed to a slight modification of the terms of the concession to meet the situation thus created and Sir E. Grey stated in the House of Commons that "every effort will be made to proceed with survey as soon as the situation in Luristan appears to the responsible authorities to justify such a step.... It is contemplated that the Swedish gendarmerie which has done very good work recently in other parts will devote their attention to Luristan with the object of pacifying that part of the country as they have done in some other parts." As a result of repeated Anglo-Russian applications the Swedish Government permitted General Hjalmarsson, the head of the Persian gendarmery, to return to Persia in November, 1914. The war resulted in great unrest and in treachery on the part of the Swedish gendarmerie officers, as a result of German instigation, in Western Persia. The Persian Government dispensed with the services of the Swedes and nothing further has been reported about progress with the Karun Valley line.

Period of Transit.

It is commonly said that the Trans-Persian railway would bring India within eight days of London. The possibility was demonstrated by the performance of a party who travelled from London to Persia in 1914 and sent the following details of their journey to the *Times*. The party left London by the 8-35 p.m. train on a Saturday and arrived at Baku at 10-20 p.m. (London time, say, 7-30 p.m.) on the following Thursday, and at Enzeli, on the south-west shore of the Caspian, (reached by steamer from Baku), at 6 a.m. on the following Saturday,—that is, within six and a half days from London. They travelled *via* Folkestone, Flushing, Berlin, Warsaw, Snamenka, Rostoff and Beslan, and were detained at Warsaw some ten hours and at other points a full 12 hours more, thus reducing the actual travelling to 6¼ days, which was a "record." There remained, at the end of their journey, only the trans-Persian stage, which it is hoped to cover by the new line, so that an express service from London to Delhi ought to be easily possible within the eight days.

Foreign Consular Officers in India.

Name.	Appointment.	Port.
Argentine Republic.		
Mr. C. W. Rhodes	Vice-Consul	Calcutta.
Austria-Hungary.		
The American Consuls are in charge of Austro-Hungarian interests during the War.		
Belgium.		
Mr. Robert Chaidron	Consul	Bombay.
Mr. J. Simon	Do.	Calcutta.
Mr. James Rorie Baxter (Ag.)	Do.	Karachi.
Mr. E. S. Murray	Do.	Aden.
Mr. G. K. Walker	Do.	Madras.
Mr. W. Macdonald	Do.	Rangoon.
Mr. R. A. Scott	Do.	Akyab.
Mr. J. Lince	Vice-Consul	Calcutta.
Mr R. W. Watson (In charge)	Do.	Bombay.
Bolivia.		
Kumar Shyama Kumar Tagore	Consul-General	Calcutta.
Brazil.		
Mr. Joakim D. S. Nahapiet	Consul	Calcutta.
Mr. T. A. DeSouza	Do.	Do.
Dr. Edward F. Underwood, M. A., M D., Ph. D., J. P.	Do.	Bombay.
Mr. J. B. Halliday	Vice-Consul	Rangoon.
Mr. J. F. Brown	Commercial Agent	Do.
Chile.		
Senor Don Arturo Cabrera-Grez	Consul-General	Calcutta
Vacant	Vice-Consul	Bombay.
Vacant	Do.	Madras
Senhor L. Grommers	Do.	Calcutta.
Vacant	Do.	Chittagong.
Mr. William Archibald	Do.	Rangoon.
China.		
Mr. Hsiao Yung Hsi	Consul	Rangoon.
Costa Rica.		
Kumar Shyama Kumar Tagore	Consul	Calcutta.
Cuba.		
Mr. John Zuberbuhler (Acting) on leave	Honorary Consul	Bombay.
Dr. Blasio Paes (In charge)	Do.	Do.
Vacant	Do.	Calcutta.
Denmark.		
Mr. C. J. Elton	Consul-General	Calcutta.
Mr. A. F. Sells	Consul	Bombay
Mr. E. S. Murray	Do.	Aden.
Mr. R. T. Menzies	Do.	Madras.
Mr. I. F. Jensen	Do.	Rangoon.
Vacant	Vice-Consul	Karachi.
Mr. S. G. L. Eustace	Do.	Calcutta.
Mr. P. T. Christensen	Do.	Moulmein.

Name.	Appointment.	Port.
Ecuador.		
Kumar Shyama Kumar Tagore	Consul	Calcutta.
France.		
Mons. Ch. Barret (Acting)	Consul-General	Calcutta.
Mr. E. Nicault	Chancellor	Do.
M. Charles L. C. M. Barret	Consul	Bombay.
M. Harold Martin	Vice-Consul	Do.
M. H. Martin (in charge of consulate)	Do.	Do.
M. M. Ries (on leave)	Consular Agent	Aden.
M. Adolphe Ries (Acting)	Do.	Do.
Mr. E. L. Price	Do.	Karachi.
Mr. F. E. L. Worke	Do.	Madras.
Vacant	Do.	Chittagong.
Do.	Do.	Rangoon.
Do.	Do.	Akyab.
Do.	Do.	Coconada.
Do.	Do.	Tellicherry.
Do.	Do.	Do.
Germany.		
The Swiss Consular officers are in charge of German interests during the War.		
Greece.		
Mr. E. Apostolides	Consul	Calcutta.
Guatemala.		
Mr. H. J. Sanders	Consul	Calcutta.
Italy.		
Marquis F. Medici di Marignano	Consul-General	Calcutta.
Cav. G. Cecchi	Consul	Aden.
Cav. Dr. G. Gorio (on leave)	Do.	Bombay.
Signor Alfredo Manzato (Acting)	Do.	Do.
Mr. J. Meikle	Do.	Rangoon.
Vacant	Vice-Consul	Calcutta.
Signor Alfredo Manzato (in charge of consulate)	Do.	Bombay.
Mr. Gordon Fraser	Consular Agent	Madras.
Vacant	Do.	Moulmein.
Vacant	Do.	Akyab.
Mr. H. J. Guy, R.N.R.	Do.	Bassein.
Signor Aldo Viola	Do.	Karachi.
Japan.		
Mr. Kametaro Tijima Shorokui	Consul-General	Calcutta.
Mr. Y. Shibata	Do.	Do.
Mr. Kazue Kuwashima	Consul	Bombay.
Mr. Kenzo Ito, Chancellor		
Liberia.		
Dr. Benode Behari Banerjee	Consul	Calcutta.
Dr. C. H. Freeman Underwood, M.D.	Do.	Bombay.
Mexico.		
Mr. R. L. B. Gall	Consul	Calcutta.

Name.	Appointment.	Port.
Netherlands.		
Mons. J. Barendrecht	Consul-General	Calcutta.
Mons. L. Grommers	Consul	Do.
Mons. J. G. Bendien (on leave)	Do.	Bombay.
M. Paulus Staal (Acting)	Do.	Do.
Mr. D. van Wijngaarden	Do.	Karachi.
Mr. W. Meek	Do.	Aden.
Mr. R. A. Scott	Do.	Akyab.
Monsieur W. Massink	Do.	Rangoon.
Mr. J. W. Crusha	Do.	Madras.
Mr. A. J. Steiger	Do.	Colombo.
Norway.		
Mr. H. J. Sanders	Consul-General	Calcutta.
Mr. F. E. Hardcastle	Consul	Bombay.
Mr. W. Meek	Do.	Aden.
Sir H. S. Fraser, Kt.	Do.	Madras.
Mr. J. F. Simpson	Do.	Do.
Mr. H. A. Rees	Do.	Rangoon.
Mr. G. J. Smidt	Vice-Consul	Calcutta.
Mr. S. G. Ritherdon	Do.	Chittagong.
Mr. S. Lucas	Do.	Do.
Mr. A. Gardiner	Do.	Coconada.
Mr. D. Miller	Do.	Tuticorin.
Mr. E. G. Moylan	Do.	Akyab.
Mr. J. Anderson	Do.	Bassein.
Mr. J. McCracken	Do.	Do.
Mr. J. J. Shaw	Do.	Moulmein.
Mr. Vivian Fox (on leave)	Do.	Karachi.
Mr. I. R. Baxter (Acting)	Do.	Do.
Persia.		
Mirza Sir Davood Khan Meftahos-Saltaneh, K.C.M.G.	Consul-General	Calcutta.
Mirza Ali Akbar Khan, B.A.; Barrister-at-Law.	Consul	Bombay.
Khan Bahadur Haji Mirza Shujaut Ali Beg	Do.	Calcutta.
Vacant	Do.	Madras.
Kumar Shyama Kumar Tagore	Vice-Consul-General	Calcutta.
Mir. Ayub Khan	Vice-Consul	Karachi.
Vacant	Do.	Rangoon.
Do.	Do.	Moulmein.
Peru.		
Mr. W. Smidt	Consul	Rangoon.
Mr. J. B. Strain	Do.	Calcutta.
Portugal.		
Senhor Benito d'Alpoim Toresano Moreno	Consul-General	Bombay.
Dr. E. M. D'Souza	Consul	Rangoon.
Mons. C. Jambon	Do.	Calcutta.
Mr. Shairp	Do.	Colombo.
Mr. Hormusji Cowasji Dinshaw	Do.	Aden.
Dr. F. daCunha Pinto	Vice-Consul	Bombay.
Dr. A. B. daFonseca (on leave)	Do.	Karachi.
Dr. L. Castallins (Acting)	Do.	Do.
Dr. A. M. D'Souza	Do.	Rangoon.

Name.	Appointment.	Port.
Russia.		
Vacant	Consul-General	Calcutta.
Mons. M. Ries (on leave)	Vice-Consul	Aden.
Mr. Adolphe Ries (Acting)	Do.	Do.
Mons. Vsevolod Ampenow	Do.	Calcutta.
Mr. S. J. Bodaline	Do.	Do.
Siam.		
Mr. H. P. W. Macnaghten	Consul	Bombay.
Vacant.	Do.	Calcutta.
Mr. B. J. B. Stephens	Do.	Rangoon.
Mr. A. H. Russell	Do.	Moulmein.
Mr. C. Van-der-Gucht	Do.	Do.
Spain.		
Mr. Harold Martin (in charge)	Consul	Bombay.
Mons. L. Grezoux	Vice-Consul	Calcutta.
Mons. M. Ries (on leave)	Do.	Aden.
Mr. Adolphe Ries (Acting)	Do.	Do.
Mr. J. S. Walker (Acting)	Do.	Rangoon.
Sweden.		
Mr. W. L. Wanklyn	Consul-General	Calcutta.
Mr. E. R. Logan	Consul	Madras.
Mr. L. Volkart	Do.	Bombay.
Mr. A. E. Adams	Do.	Aden.
Mr. E. T. Hicks	Do.	Rangoon.
Mr. T. H. Wheeler	Vice-Consul	Calcutta.
Vacant	Do.	Moulmein.
Switzerland.		
Mr. Charles Ringger	Consul	Bombay.
Turkey.		
The Consular officers for Sweden are in charge of Turkish interests during the war.		
United States of America.		
James A. Smith	Consul-General	Calcutta.
J. P. Doughten	Vice-Consul	Do.
Samuel C. Reat	Consul	Rangoon.
H. B. Osborn	Vice-Consul	Do.
Lucien Memminger	Consul	Madras.
Frank C. Rich	Vice-Consul	Do.
Walter A. Leonard	Consul	Colombo.
John A. Nye	Vice-Consul	Do.
Stuart K. Lupton	Consul	Bombay.
Selby S. Coleman (on leave)	Vice-Consul	Do.
James Oliver Laing	Consul	Karachi.
E. L. Rogers	Vice-Consul	Do.
Addison E. Southord	Consul	Aden.
Arthur G. Watson	Vice-Consul	Do.
H. W. Timewell	Consular Agent	Busrah, Persian Gulf.
.....	Do.	Chittagong.
Uruguay.		
Mons. C. Jambon	Consul	Calcutta.

The Army.

The great sepoy army of India originated in the small establishments of guards, known as peons, enrolled for the protection of the factories of the East India Company; but sepoys were first enlisted and disciplined by the French, who appeared in India in 1665. Before this, detachments of soldiers were sent from England to Bombay, and as early as 1625 the first fortified position was occupied by the East India Company at Armagon, near Masulipatam. Madras was acquired in 1640, but in 1654 the garrison of Fort St. George consisted of only ten men. In 1661 Bombay was occupied by 400 soldiers, four years before the French appeared in India. In 1668 the garrison of Bombay consisted of 285 men, of whom only 93 were English, the remainder being French, Portuguese and natives.

While the origin of the regular sepoy army is usually dated from 1748, when Stringer Lawrence, "the father of the Indian Army," enrolled an Indian force in Madras, it is interesting to note that there was a considerable military establishment in Bombay prior to that date. In 1741 this establishment, which was considered as one regiment, consisted of a captain, nine lieutenants, fifteen ensigns, a surgeon, two sergeant-majors, 82 sergeants, 82 corporals, 26 drummers, and 319 European privates, together with 31 "masters" (probably Eurasians) and 900 topasses—presumably Goanese. These were distributed in seven companies, their total monthly pay being 10,314 rupees. There was in addition a kind of native militia, composed of 700 sepoys including native officers. These were maintained at a monthly cost of 312 rupees. They were not equipped or dressed in a uniform manner, but supplied their own weapons—swords and shields, bows and arrows, pikes, lances or matchlocks. After the declaration of war with France in 1744, the forces at Bombay were considerably increased, and an artillery company was raised. Already in 1740 the French at Pondicherry had raised a large force of Musalman soldiers, armed and equipped in the European fashion; and the fall of Madras, which the French captured in 1746, induced the English East India Company to begin the formation of a military establishment of like nature. In January 1748 Major Stringer Lawrence landed at Fort St. David to command the forces of the Company. The English foothold in India was then precarious. The French under Dupleix were contemplating further attacks; and it became necessary for the English Company to form a larger military establishment. The new commandant at once set about the organisation and discipline of his small force. The garrison was organised in seven companies; and the peons, or factory guards, were also formed into companies. This was the beginning of the regular Indian Army, of which Lawrence eventually became Commander-in-Chief. In Madras the European companies developed into the 1st Madras Fusiliers; similar companies in Bombay and Bengal became the 1st Bombay and 1st Bengal Fusiliers. The native infantry was similarly developed and organised by Lawrence and Clive, who was his contemporary, and military adventurers—both Musalman and Hindu—readily took service under the East India Company. By degrees Royal Regiments were sent to India, the first being the 39th Foot which arrived in 1754.

Struggle with the French.

From this time for a century or more the Army of India was engaged in constant war. After a prolonged struggle with the French, whom Dupleix had by 1750 raised to the position of the leading power in India; the efforts of Stringer Lawrence, Clive and Eyre Coote completed the downfall of their rivals, and the power of England was established by the battle of Plassey in Bengal and on the field of Wandewash in Southern India. In 1761 the final overthrow of the French was completed, and the territories of that enterprising people were reduced to a few settlements on the coast, the principal of which, Pondicherry, was captured in 1793. But while the Army of India had accomplished this much, they had now to contend with the great native powers, both Hindu and Mahomedan. A number of independent states had arisen on the decline of the Mughal Empire, some ruled by the satraps of the Emperor of Delhi and others by the Mahratta princes who had succeeded to and extended the conquests of Sivaji; while in Mysore Hyder Ali, a Mussalman adventurer, had established himself in the place of the Hindu Raja. A great and prolonged struggle took place with the ruler of Mysore, in which the forces of the Crown and the Company's Army bore a distinguished part. This struggle extended over nearly twenty years, and terminated only with the death of Hyder's son and successor Tipu when his capital of Seringapatam was taken by assault in 1799.

Presidency Armies.

The extension of British territory had necessitated a corresponding augmentation in the strength of the armies of Bengal, Madras and Bombay, which were entirely separate organisations, as rendered requisite by the great distances and independent territories by which they were separated. But Bengal and Bombay troops had taken part in the wars in Southern India, although the brunt of the fighting had fallen on the Madras Army. These armies had grown both in strength and efficiency. In 1787 the Governor-General, Lord Cornwallis, wrote to the Duke of York—"A brigade of our sepoys would make anybody emperor of Hindustan. The appearance of the native troops gave me the greatest satisfaction; some of the battalions were perfectly well-trained, and there was a spirit of emulation among the officers; and an attention in the men, which leaves me but little room to doubt that they will soon be brought to a great pitch of discipline."

Reorganisation of 1796.

In 1796, when the native armies were reorganised, the European troops were about 13,000 strong; the native troops numbered some 57,000, the infantry being generally formed into regiments of two battalions each. In Bengal native infantry regiments were formed by linking existing battalions. The establishment of each two-battalion regiment was 1 colonel commandant, 2 lieutenant-colonels, 2 majors, 8 captains,

22 lieutenants, 10 ensigns, 2 European non-commissioned officers, 40 native officers, 200 native non-commissioned officers, 40 drummers and fifers, 1,600 sepoys. Each battalion had two grenadier and eight battalion companies. Promotion and furlough rules for the officers were promulgated and interior economy was improved. At the same time the Madras and Bombay armies were reorganised. The Madras cavalry was formed into four regiments, having twelve British officers each, the artillery into two battalions of five companies each and fifteen companies of lascars. The native infantry was organised in eleven two-battalion regiments, rather stronger than those of the Bengal establishment. There were also two battalions of European infantry. The Bombay Army was organised on similar lines, with an establishment of six two-battalion regiments and a Marine Battalion; six companies of European artillery were formed in 1798.

Policy of Wellesley.

Besides the wars that have been referred to, the East India Company had been engaged in minor operations, particularly against the growing power of the Mahrattas, which menaced the stability of the British in India. In 1798 the Marquis Wellesley arrived as Governor-General firmly imbued with the necessity of reducing the power and influence of the French, which had again arisen through the military adventurers who had established themselves in the service of various native powers. There was a French party at Seringapatam, and the ruler of Mysore was in correspondence with Napoleon Bonaparte in Egypt. At Hyderabad the French adventurer Raymond dominated the State army, having under his command a disciplined force of 14,000 men who carried the colours of the French Republic and wore the Cap of Liberty engraved upon their buttons. In the Mahratta States, and especially in Sindia's service, adventurers of the same enterprising nation had disciplined large forces of infantry and artillery; and the blind Mughal Emperor at Delhi was held in the power of Perron, Sindia's French General. One of the first acts of the new Governor-General was to disarm the French party at Hyderabad, a measure carried out by Captain (afterwards Sir John) Malcolm. The French officers in the Nizam's service were deported to their own country, and a treaty of alliance was concluded under the terms of which a Contingent of Hyderabad Troops was supplied for service in the campaign of Seringapatam. Troops of all three presidencies took part in the campaign which terminated with the capture of Seringapatam and the death of Tipu on the 4th May 1799. It was in this campaign that Colonel Arthur Wellesley, afterwards Duke of Wellington, came into prominent notice. It was now necessary to direct attention to affairs in the Mahratta States, which were encroaching on the territories of our ally the Nizam, and had a dangerous ascendancy throughout India. An opportunity occurred in supporting the Peshwa, who had been expelled from Poona by Holkar.

The Mahrattas.

The Mahrattas, originally mere predatory hordes, had become an organised nation under the rule of Sivaji. After his death the Government which he had inaugurated passed from the feeble hands of his successors, the Rajas of Satara, into those of the astute Brahmin Ministers, the Peshwas; who had their seat at Poona. Other Mahratta princes, descended from officers of State—Sindia, Holkar, the Gaikwar and the Raja of Berar—held sway over a great part of India; and were attempting to extend their dominions and consolidate their influence from the Ganges to the Godavery. The Mahrattas; famous as irregular predatory hordes in times gone by, had never been remarkable for courage, the place of which was supplied by their natural astuteness and capacity for organisation. The genius of the nation lay more in the direction of diplomacy and intrigue, and a false glamour appears to surround their name as warriors, to which history has lent an undeserved prestige. Their success must in part be prescribed to their intellectual acumen and subtlety, and in part to the effete condition of those with whom they had to contend. The edifice of their nationality was built on the ashes of the declining Mughal Empire. But even since the days when their military renown had rested on some solid foundation they had rapidly declined, and the phantom of their fame was dissipated the moment they came into collision with European armies. Their artillery and infantry, composed of Jats, Rajputs, Arabs and other mercenaries, fought with desperate valour, but the far-famed Mahratta horse disappeared from the field at the beginning of every action. General Lake in the north of India defeated the forces of Sindia in a succession of battles at Aligarh, at Agra, at Delhi and Laswari; while in the south General Arthur Wellesley captured Ahmednagar and Gawilgarh, and gained complete victories over the combined forces of Sindia and the Raja of Berar at Assaye and Argaum. In these campaigns a considerable British force and a large portion of the Bengal and Madras armies were employed; they acquitted themselves with their customary valour, and gained some of the most notable victories recorded in English history. During the progress of these wars the Army of India was considerably augmented; and we find that on reduction to peace establishment in 1805 there were some 25,000 British and 130,000 native troops in India.

Mutiny at Vellore.

The Indian Army has been from time to time subject to incidents of mutiny which were precursors of the great cataclysm of 1857. In the fort of Vellore in 1806 were confined the sons of Tipu Sultan, these descendants of the most fanatical enemy of the English in India being permitted to maintain a large body of adherents and an almost regal state. Naturally they intrigued. The native soldiers of the Company had grievances. The military authorities had issued a new pattern of turban, which owing to its resemblance to the head-dress worn by half-caste drummers, gave rise to a rumour that their conversion to Christianity was intended. Other inconsiderate orders, prejudicial to the religion and sentiments of both Hindus and Mahomedans, caused the smouldering discontent already existing to break out into open

mutiny. There were many signs and portents typical also of the greater rebellion. The officers had become estranged from their men and lived too much apart from them. The native troops suddenly broke out and killed the majority of the European officers and soldiers, their wives and children, quartered in the fort, while the striped flag of the Sultan of Mysore was raised on the ramparts. But if the parallel so far is close, the method of dealing with the outbreak of 1806 differed widely from the weakness displayed at Meerut in 1857. There was happily at the neighbouring station of Arcot a soldier of energy, decision, and courage both moral and physical. Colonel Gillespie with the 19th Light Dragoons and galloper guns came down upon the mutineers like a hurricane, blew in the gates of the fort, destroyed most of the sepoys, and in the course of a few hours suppressed the rebellion. This retribution struck terror into the hearts of other would-be mutineers and disaffection, which was rife throughout the Madras Army, did not elsewhere find active expression.

Overseas Expedition.

Almost as dangerous was the mutinous discontent excited among the British officers by the ill-advised measures of Sir George Barlow, unfortunately acting temporarily as Governor-General in 1809, which was with difficulty quelled by the tact of wiser and more considerate men. It was not only within the confines of India that the Army distinguished itself during the period under review. Expeditions were made beyond seas. Bourbon was taken from the French; Ceylon, Malacca, and the Spice Islands were wrested from the Dutch; and Java was conquered in 1811 by a force largely composed of Bengal troops which had volunteered for this service. In 1814 took place the Nepal War, in which the brave Gillespie who had so distinguished himself at Vellore and in Java, was killed when leading the assault on a fort near Dehra Dun. This war is chiefly of interest from its having introduced us to the Gurkhas, inhabitants of Nepal, who form so large and efficient a portion of our Indian Army.

Second Mahratta War.

In 1817 hostilities again broke out with the Mahrattas. The primary cause of the war were the Pindaris, a military system of bandits of all native races and creeds who, formed mostly from the military adventurers who had been employed by native potentates, had established themselves in strongholds on the banks of the Narbada river, from whence they issued to plunder the country from the end to end. These people had become so formidable that a large army had to be assembled for their destruction, for they viewed with dismay and opposed with force the establishment of effective power in the land where they had so long carried on with impunity their lawless modes of life. To cope with this growing evil, armies were to close in from every direction on the fastnesses of the Pindaris. At the same time a watch had to be kept on the Mahratta States, whose rulers, encouraged by the feeble policy that had followed when the strong hand of the Marquis Wellesley was removed, were prepared to take up arms once more. Practically the whole of the Army took the field, and all India was turned into a vast camp. The experiences of 1817 differed in no wise from those of 1803, except that resistance was less stubborn as the brigades of the European military adventurers no longer existed in the Mahratta armies. The Chiefs of Poona, Nagpore, Indore and Gwalior rose in succession. At the battle of Kirkee, where the tramp of the myriad Mahratta horse shook the very earth, they were beaten off by one-tenth of their numbers after a feeble attempt to charge a native regiment. At Koregaum where the detachment under Captain Staunton offered so gallant a resistance to the attacks of a vastly superior force, the Arabs alone fought on the side of the Mahrattas, 20,000 of whom stood idle on the plain. At Sitabaldi a few regiments of Madras native infantry beat off the attacks of the army of the Raja of Nagpore, and victory was assured by the charge of a troop of Bengal cavalry. At the battle of Mahidpur the hosts of Holkar melted like snow from the face of the desert before the determined onslaught of a small army of British and native troops. This was the last war in Southern India. The tide of war rolled to the north, never to return. In the Punjab, to the borders of which our frontier was now extended, the Army was to meet in the great military community of the Sikhs, a braver and more virile foe.

Reorganisation in 1824.

In 1824 there was another outbreak of mutiny, this time at Barrackpore in a regiment that was unwisely dealt with when about to proceed to the Burmese War. In that year the armies were reorganised, the double-battalion regiments being separated, and the battalions numbered according to the dates when they were raised. The Bengal Army was organised in three brigades of horse artillery, five battalions of foot artillery, two regiments of European and 68 of native infantry, 5 regiments of irregular and 8 of regular cavalry. The Madras and Bombay armies were constituted on similar lines, though of lesser strength. There were also various local forces, such as the Hyderabad Contingent, paid for by the Nizam, consisting of horse, foot and artillery. The irregular cavalry were all silladars, that is the troopers furnished their own horse and equipment, as do the greater part of the native cavalry of to-day. The irregular and local corps had each only two or three European Officers.

First Afghan War.

In 1839 the occupation of Afghanistan was undertaken, Kabul was occupied, and a large Army stationed in this country beyond the Indus. There followed the disasters of Kabul, the murder of British envoys, and the retreat in which a whole army perished. This disaster was in some measure retrieved by subsequent operations, but it had far-reaching effects on the *morale* of the Army and on British prestige.

The Sikhs.

The people of the Punjab had witnessed from afar the disaster of the retreat from Kabul. It is true that they had seen also the advance of the victorious army, and the triumph of its return which was celebrated

with barbaric pageantry at Peshawar; but the British army had lost the prestige of invincibility which it had gained during a hundred years of victory throughout peninsular India. It is convenient here to give some account of the Sikhs in whom our army met a more formidable enemy than they had hitherto encountered, who have since supplied many of the best soldiers in its ranks, and who less than nine years later served with valour and fidelity beneath our colours in the great struggle of the sepoy war. In the early part of the sixteenth century Baba Nanak, a peasant of a village near Lahore, founded the religious sect which was to play such an important part in the history of India. The religion he preached was pure monotheism and in no way militant in its original form. The new faith, founded on the Unity of God and the religious equality of man, gradually made great headway, the philanthropy and tolerance of its tenets appealing to the hearts of men. The Gurus who succeeded Nanak were active in their teaching; they founded and built the Golden Temple at Amritsar; and the sect began to assume a political significance. This brought them into conflict with the Mughal Government, and Sikhism was subjected to that persecution which was alone necessary to transform it into a militant political force. Har Govind, the Sixth Guru, became a military as well as a spiritual leader, and on his death in 1645 left the Sikhs a strong and militant power.

After two hundred years the Sikh faith became established as a guiding principle to work its way in the world. Nanak disengaged his little society of worshippers from Hindu idolatory and Mahomedan faith; Amar Das preserved the community from declining into a sect of ascetics; Arjan gave his increasing followers a written rule of conduct and a civil organisation; Har Govind added the use of arms and a military system; Govind Singh bestowed upon them a distinct political existence, and inspired them with the desire of being socially free and naturally independent. Sikhism arose where fallen and corrupt Brahminical doctrines we.. most strongly acted on by the vital and spreading Mahomedan belief. As in the case of other sects whose vicissitudes are recorded in the history of the world, religious persecution gave to Sikhism that vivifying influence which was the necessary stimulus to permanence and progress. With varying fortunes the power of the Sikhs was consolidated, and by 1785 they were predominant from the frontiers of Oudh to the Indus. Their prestige is illustrated in the story of the traveller Foster, who describes the alarm caused to a petty Chief and his people by the appearance of two Sikh horsemen under the walls of their fort. The great Chief Ranjit Singh, the "lion of the Punjab," established his ascendancy throughout that province, and with the aid of European military adventurers such as Ventura and Allard organised a powerful regular army. Ranjit Singh had the wisdom to keep on friendly terms with the English, but his death was the signal for internal dissensions which in course of time rendered the Army the principal power in the state; and brought them into conflict with their English neighbours.

Sikh Wars.

A large portion of the Bengal Army under Sir Hugh Gough took part in the first Sikh War in 1845-6, in the opening battle of which, at Mudki and Ferozeshahr, the native troops did not greatly distinguish themselves; although they retrieved their reputation in subsequent actions when the Sikhs were defeated at Aliwal and Sobraon. But the Bengal Army had for some time been undergoing that deterioration of discipline which culminated a dozen years later in the mutiny. They were no longer the soldiers of Lake and Hastings; the heroes of Laswari, of Seringapatam, and of expeditions overseas. In the snows and deserts of Afghanistan and amid the bloody scenes of the Khurd Kabul Pass and Jagdalak they had lost much of their ardour and prestige, while they had witnessed the defeat and slaughter of their hitherto invincible English comrades. They fought well on occasion; stimulated by the presence and example of English regiments; but their training and discipline left much to be desired. The second Sikh War followed a few years later, when; after the indecisive battle of Chillianwala, the Sikhs were finally vanquished at Gujarat. The other campaigns belonging to this period were the conquest of Sind by Sir Charles Napier and the Second Burmese War. On the eve of the Mutiny there were in the Bengal Army 21,000 British and 137,000 native troops; in the Madras Army 8,000 British and 49,000 native troops; and in Bombay 9,000 British and 45,000 native troops. The conquest of the Punjab extended our frontier to the country inhabited by those turbulent tribes which have given so much trouble by their raids and forays, while they have supplied many soldiers to our army. To keep order on this north-western limit of the Empire the Punjab Frontier Force was established, and was constantly engaged in small expeditions which, while they generally involved but little bloodshed, kept the Force fully employed for many years, and involved much ardous work in the pursuit of an elusive enemy.

The Indian Mutiny.

The history of the Indian Army in general and of the Bengal Army in particular is so closely bound up with the great Mutiny of 1857 that it is necessary to enter into some account of the causes which brought about that catastrophe, and to sketch in outline its chief events. In 1856 Lord Dalhousie resigned the Viceroyalty of India after a term of office marked by strenuous activity and by an extensive policy of annexation. From Oudh a dissolute and incompetent king was removed and his territories were annexed to the British dominions, an act which could not but have a disturbing effect in a country where the natural and hereditary rulers of the people were regarded with the greatest veneration. The territory of Jhansi was also annexed, the Government refusing to allow the Rani to adopt an heir to succeed her deceased husband; and the Nana of Bithur, adopted son of the last Peshwa Baji Rao, was refused a continuance of his adoptive father's pension. These two latter, the Rani of Jhansi and Nana Sahib, became the bitterest and most cruel of our enemies. The

annexation of Oudh was a severe shock to the susceptibilities of the feudal nobles of that province, from which it must be remembered a large portion of the Bengal Army was recruited. There were thus political causes of disaffection in India apart from the constant presence of racial difference, fostered by political agitators and a seditious press. There were Princes and States ripe for rebellion while on the throne of the Mughals at Delhi there sat the shadow of a monarch whom tradition and the greatness of a name caused to be venerated by Mussalmans throughout India. And in the Bengal Army political agitators found a fertile soil for planting the seed of corruption.

The infantry of that army had in its ranks a great majority of Oudh sepoys; while men of the same race formed the bulk of forces such as the Gwalior Contingent, maintained by Native States under the terms of treaties with the British Government. A small percentage of Mahomedans of Hindustan was also to be found in the Bengal Native Infantry, while they supplied the greater part of the Cavalry of that Presidency. It will thus be understood that in both armies there was a dangerous preponderance of one class, facilitating and extending combination on the part of the disaffected. It was different with the armies of the other Presidencies, which were entirely separate from the Bengal Army, and under their own Commanders-in-Chief, and where men of every caste and creed were mingled in the ranks, a system which obviated the likelihood of combination among men ever prone to be suspicious of one another. There were in the Madras Army family ties to keep the men true to their salt. In that Presidency the sepoy had in almost every instance a large number of relatives living with him. He was not likely to abandon these relations to their fate, and mutiny against the Government he served. The Presidential system, in fact, offered an effective safe-guard in the "watertight compartments" that prevented those armies from intermingling. There was not only no sympathy but some antagonism between the different armies; and on one occasion when regiments of the northern and southern Presidencies were serving together, an order had to be issued that the Madras sepoys were not to irritate their brethren by calling them "Bengalis" which was regarded as an opprobrious term, applicable properly to a despised and unwarlike race which has never furnished any soldiers. While the susceptibilities of the Oudh sepoy had been hurt by the annexation of his country, the Muhammadans still held in veneration the puppet who occupied the throne of the great Mughals and cherished the recollection of former glory and power. They had in addition the influence of a fanatical religion to incite them to a holy war against the Christians. Their combination with the Hindus is, however, somewhat remarkable, and the causes which brought these antagonistic peoples into alliance must be sought for elsewhere than in political influences. That there were leaders such as the Nana, the Rani of Jhansi and the Maulvi of Fyzabad who made use of the native army for purposes of rebellion has already been indicated. But the army would not mutiny merely at the instigation of a few political intriguers and agitators. The seeds of disaffection had long been growing in the Bengal Army. The disasters of the Afghan War had taught the sepoy that his European comrade was not invincible. The proportion of Native to British soldiers in India was far too great. The Indian Empire in those days rested too largely on mercenary forces. There were in the country only some 38,000 British soldiers, while the native troops numbered 200,000 men, exclusive of the numerous levies of independent or semi-independent princes. A great establishment of native artillery had grown up. While the Bengal sepoy had deteriorated in *morale*, he had cause for discontent. He had been alternatively pampered and abused. The grant of extra allowances on all occasions for field service had in the first place excited his cupidity; their withdrawal had aroused his discontent. He feared that attempts were being made to destroy his caste and subvert his religion, the points on which he was most sensitive. There was too much centralisation of power in the hands of the military authorities at Army Headquarters. The proselytising spirit was abroad, and some amiable but fanatical officers preached their religion about the country. The crucial question of the greased cartridges brought matters to a head. With a great deal of reason the sepoys complained of the new cartridge, the paper of which was greased with animal fat, said to be that of swine and oxen, the former abhorrent to Musalmans, the latter sacrilegious to Hindus. The mysterious unleavened cakes were circulated, and while their significance was realised by some, it was ignored by those in authority.

Course of the Rising.

The introduction of the new cartridge for the Enfield Rifle in January 1857 caused widespread alarm among the native ranks of the army. At Berhampore the 19th Bengal Infantry mutinied, and was marched to Barrackpore, and there disbanded on the 31st March. On the 29th March, sepoy Mangal Pande, of the 34th Bengal Infantry at Barrackpore, attacked and wounded the Adjutant and European sergeant-major of his regiment. At Meerut on the 24th April eighty-five men of the 3rd Bengal Cavalry refused to take the new cartridge. They were tried and sentenced to ten years' imprisonment, their sentence being announced and fetters rivetted on at parade on the 9th May. This degrading aggravation of punishment was the spark that fired the mutiny. Next evening the troops in Meerut rose, and, aided by the bazaar rabble, killed every European they met, released their comrades from the gaol, and went off to Delhi. It is unfortunate that there was at Meerut no senior officer capable of dealing with the crisis. There were in garrison two batteries of field artillery, as well as one of the finest cavalry regiments in the British Army, the Carabineers, and a battalion of Rifles. But fatal inaction paralysed the Europeans, and the mutinous soldiery marched unmolested to Delhi. Here the troops soon followed suit, murdered some of their officers, while others escaped, and a number of Europeans of all ages and both sexes was massacred in the

place and in the streets. An army was at once organised for the recovery of Delhi, while forces were collected in the Punjab, which remained loyal under the strong hand of John Lawrence. The British columns having defeated the rebels who opposed them at Badli-ki-Sarai, arrived before Delhi on the 8th June, and began the long seige which terminated with the capture of the city in the middle of September, when the heroic Nicholson fell in the hour of victory. Meanwhile the mutiny had spread to other corps of the Bengal Army. The native troops at Cawnpore rose on the 4th June, massacred the Europeans of the Garrison who surrendered on the 27th, while the women and children were butchered on the 15th July, the day before Havelock's relieving column defeated the Nana and entered Cawnpore. There was mutiny at many other places during this period not only at stations north of the Jumna, but in Central India, and in Rajputana, where the disaffected troops of the Gwalior Contingent were stationed at Gwalior, Neemuch, Nasirabad and other cantonments. At Jhansi a general massacre took place, when the Europeans unwisely surrendered to their pitiless foe. Throughout Bundelkhand and the Central Provinces the wilder spirits of the country rose and banded with the mutineers. With few exceptions the Bombay Army remained loyal, as did the Madras Army and the Hyderabad Contingent, although there were some isolated out-breaks at Hyderabad and at Sholapur. But generally speaking the rebellion did not spread south of the Tapti River. On the 30th September the troops at Lucknow rose, and there began the long and glorious defence of the Residency by the beleaguered garrison under Sir Henry Lawrence; Lucknow was relieved by Havelock and Outram on the 27th September, but the rebel hold on the defenders was not relinquished until Sir Colin Campbell advanced and drove off the mutineers with terrible slaughter two months later. Having relieved Lucknow, Sir Colin Campbell marched to Cawnpore, where General Windham had been driven into the intrenchments, and was with difficulty holding his own against the Gwalior Contingent under Tantia Topi. On the 6th December 1857, Cawnpore was relieved, and the rebels retired on Kalpi. It was not until 1858 that the small army under Sir Hugh Rose, the most skilful and enterprising leader of those times, marched through Central India, relieving many beleagured places, fighting many pitched battles, and avenging the massacre of Jhansi in the storm and capture of that place, at the capture of Kalpi, and at Gwalior where the Rani of Jhansi was killed at the head of her troops, and Sindia was restored to the capital from which he had been expelled.

Reorganisation after the Mutiny.

When the country had been pacified, the Government of India was assumed by Queen Victoria, and the East India Company ceased to exist. The Company's European regiments were transferred to the crown, and a regular system of relief of British regiments employed in India was instituted, the charges being paid out of the Indian revenues. The Bengal Army had almost disappeared; and while a new army was raised in that Presidency, the Madras and Bombay armies were also reorganised Native artillery was abolished, with the exception of some mountain batteries and the field batteries of the Hyderabad Contingent. The officering of the reorganised armies was carried out by the organisation of a Staff Corps for each Presidency, on which the officers were all borne on a general list and supplied to regiments and to the staff. On completion of the reorganisation in 1863, the armies had the following strength:—

Bengal Army—19 Cavalry and 49 Infantry regiments.
Madras Army—4 Cavalry and 40 Infantry regiments.
Bombay Army—7 Cavalry and 30 Infantry regiments.
Punjab Frontier Force—6 Cavalry and 12 Infantry regiments.
Hyderabad Contingent—4 Cavalry and 6 Infantry regiments.
Other Local Corps—2 Cavalry and 5 Infantry regiments.

The total strength amounted to 140,000 men; and there were in India 65,000 British soldiers. The regiments were officered by a reduced cadre eventually fixed at eight British officers to each corps, except that the Hyderabad Contingent and other local corps had an establishment of four only. The promotion of officers was made dependent on length of service, 12 years to Captain, eventually reduced to nine years, 20 years to Major, reduced to 18 years, and 26 years to lieutenant-colonel. The Staff Corps system, which still continues in fact though not in name, has the disadvantage that it entails the frequent transfer of officers from one corps to another.

Minor Campaigns.

During the period succeeding the mutiny, until 1879, when the second Afghan War began, there were many minor campaigns, including the Ambeyla expedition, the China War of 1860, and the Abyssinian War, when Napier of Magdala, who had fought in the Sikh Wars and in the Mutiny, commanded the expeditionary army. There followed the Afghan War, in which the leading figure was Lord Roberts. There were expeditions to Egypt and China, and various frontier campaigns, the most important of which was that on the North-West Frontier in 1897, since when that turbulent country has been generally quiet. There were also the prolonged operations following on the annexation of Burma, several campaigns in East Africa and Somaliland, and the expedition to Lhasa. But since the Afghan War the Army of India, except that portion of the British garrison which was sent to South Africa, has had little severe fighting, although engaged in many arduous enterprises.

Reforms.

The twenty years which began in 1885 witnessed many reforms and augmentations of the Indian Army, due to preparations to resist the menace of the Russian advance towards India. The composition of the Army was improved by the elimination of unwarlike men from the ranks. In pursuance of this reform many Madras regiments were reduced and replaced by corps composed of more virile races. "Class" troops and

companies were formed instead of men of every caste and creed being mingled in the ranks and in some cases class regiments were raised. But it is generally held that, it is better to form regiments of class companies and troops, although the class regiment has its advocates among those who hold that such an organisation facilitates segregation in case of trouble. In 1887 we find the British Army in India numbering about 74,000 and the Indian Army 153,000 men. In 1888 Indian battalions were grouped in threes, each with a regimental centre, and reserves for the native army were instituted; these have been gradually augmented until the establishment numbers 25,000. In the following year Imperial Service troops, to be placed at the disposal of the British Government in case of emergency, were raised in Native States. These number 21,000 men officered by Indians and having Inspecting Officers furnished by British Officers of the Indian Army. In 1891 the Staff Corps of the three Presidencies were amalgamated, the first step in the abolition of the Presidency distinctions, furthered two years later by the abolition of the appointments of Commander-in-Chief of the Madras and Bombay Armies. While the fighting strength of the Army had been augmented and improved during all these years, the administrative services had not been neglected. The Supply and Transport services were improved and the Ordnance and Military Works were reorganised, and measures were taken for the improvement of defences, mobilisation and equipment. Changes were made in regimental organisation, and the pay and allowances of the troops were raised from time to time.

The number of British officers has been augmented at intervals. The establishment in the native infantry formerly consisted of a Commandant, two Wing Commanders, and five Wing Officers. In 1900 the Double Company system was instituted, each pair of companies being placed under a Double Company Commander, the Wing Commanders being abolished. The establishment of regiments now includes 13 or 14 British officers, squadrons and companies being commanded by native officers, of whom there are 16 in a regiment, Risaldars and Subadars commanding troops and companies, while Jemadars are their subalterns.

Lord Kitchener's Work.

The most momentous changes that have taken place in the Indian Army since the post-mutiny reorganisation were carried out under the regime of Lord Kitchener, who assumed the office of Commander-in-Chief at the end of 1902. When Lord Kitchener arrived in India, the Commander-in-Chief had only executive command of the Army, with an Adjutant-General and a Quartermaster-General as his Chief Staff Officers. There was no General Staff, the Staff of the Army in India being divided between the departments of the Adjutant-General and Quartermaster-General. The administrative departments of the Army were under the Military Member of the Governor-General's Council, of which the Commander-in-Chief was an extraordinary member. The condition of affairs was not satisfactory. The proposals of the Commander-in-Chief regarding measures involving expenditure had to be submitted to the Financial Department through the Military Department, which had entire control also of the Supply and Transport, Ordnance, Military Accounts, Remount and Military Works Departments. The consequence was frequent differences of opinion between the Military Department and Army Headquarters.

Lord Kitchener organised a General Staff, and established a Staff College at Quetta for the training of officers in the requisite duties; a Chief of the Staff was appointed, and the proper division of the work of Staff Officers was made, those of the General Staff being made responsible for the branch dealing with the Art of War, including the training of troops, while routine and administrative duties were undertaken by officers of the Adjutant-General's and Quartermaster-General's Departments.

On arrival in India Lord Kitchener found that the military system, originally constituted on sound lines, had gradually departed from the intention of its founders, and much of the power properly belonging to the Commander-in-Chief had been usurped by the Military Department, while a succession of economical Finance Ministers had so cut down the military estimates and held the purse-strings so tightly that it was impossible to force through any costly measure for the defence of the country. The military chaos which was the slow growth of a hundred and fifty years of constantly changing conditions required remoulding into an orderly cosmos. The army was in many respects, with its want of proper organisation for external war, its ponderous and antiquated administrative system, its faulty distribution in units scattered on no known strategical plan, more suited to the circumstances of a bygone age, when the country had only recently been conquered and troops had to be retained at remote and isolated stations to overawe the inhabitants. While the Commander-in-Chief was a strong and determined man with a genius for organisation, the Viceroy was also a great personality, holding strong convictions, and naturally a champion of the civil power. Lord Kitchener wished to remove the obstruction of the Military Department. Lord Curzon could brook no weakening of the power of the Civil Government. The question was not merely one of the abolition of a Department which had grown obsolete in its methods. It was a question of the status of the Chief Military Authority in the country.

Military Department Abolished.

On the recommendation of a Committee composed of Lord Roberts, Sir George White and Sir Edward Law, the Military Department was abolished, and the Military Supply Department established in its place in 1905. Lords Curzon and Kitchener again came into conflict regarding the personnel of the new Department, and the former resigned. The Commander-in-Chief now set about the task of reform. He had since his arrival in India been studying the situation, reviewing the state of our military organisation, grasping its defects and contemplating its needs. The advance of Russia towards the Hindu Khush dominated the situation as it had done for the best

part of a hundred years. Under the old chaotic system the mobilisation scheme provided for the despatch of two armies, one through the Khyber, the other by way of Quetta to Kandahar. From the North-West alone, whence the conquering hordes of all the invaders whose march is recorded in history had poured from time immemorial, was the Empire of India subject to menace from without.

But under the system then existent the measures arranged for defence provided for a force of only four Divisions of all arms. This force was not only inadequate in numbers but in capacity for expansion. Its distribution and organisation were more suited for policing internal India than to contend with an external foe. The troops were distributed in Districts under generals whose commands were geographical in designation and in area. Here were no complete Army Corps, Divisions, and Brigades ready to take the field. In case of war the troops for the field army were to be drawn from all parts of India, the various units being sorted out into Brigades and Divisions on arrival at the base of operations, and provided with a scratch lot of generals and staff officers for the occasion.

Army Re-distributed.

It was in the reorganisation of the scattered and heterogeneous forces of the Indian Empire that Lord Kitchener's great work lay. Some steps had already been taken towards the abolition of those Presidency distinctions which formerly divided the Indian native forces into three armies supplemented by a congeries of local forces. But he found three armies, each confined to its own geographical limits, beyond which its units and its personnel did not ordinarily proceed; or when they did, they carried the chains which linked them to their respective Presidencies. The units of the Indian Army were renumbered, a fruitful cause of confusion being thus eliminated; Presidency and local distinctions were abolished, and a homogeneous army, though composed of heterogeneous races, free to benefit by the experience of service in any part of India, was created. The experience of 1857 proved the measure of safety provided by the presidential system of three armies with nothing in common between them; but the new regime considered that the conditions of fifty years ago were obsolete, and had been entirely changed by increased facilities and rapidity of communication throughout the Empire.

The whole army was formed into nine Divisions, exclusive of the Burma Division, each with its proper complement of the three arms, under its General with staff complete. These Divisions were organised for war; each one could take the field intact, leaving behind sufficient troops for the maintenance of internal order. Arrangements were made for the organisation of supply and transport. The reserve was not sufficiently large to supply the wastage of war; it was expanded, the infantry reserves being augmented, while the cavalry was included in the system. Small and isolated stations were by degrees abandoned, the Divisions, or at least the Brigades, being assembled with a due regard to strategical requirements and to the necessities of training, though some are extended over a wide area of country. The nine divisions were distributed between two armies, each with its Commander, their heads resting on the main routes at Quetta and Peshawar.

The Military Supply Department, with its Member on the Governor-General's Council, was abolished in due course; an Army Department was created, to deal with much of the business carried on by its predecessor, with a Secretary in Charge. The Commander-in-Chief is now the only Military Member of Council, and it is a question whether he has not a burthen greater than one man can bear. The recommendations of Lord Robert's Committee have been ignored, for that Committee recorded the opinion that "the concentration of the whole responsibility of Supply of the Army under one head, if that head is to be the Commander-in-Chief, would be opposed to all modern principles in regard to Armies." It was feared that the system now obtaining would lead to the diversion of too large a portion of the time of the Commander-in-Chief from his natural military duties; and it certainly appears that the functions and status of that high officer have largely altered.

Indian regiments are numbered consecutively, the infantry from 1 to 130, the cavalry from 1 to 39. They have subsidiary titles based upon their composition, their territorial origin, or the names of distinguished officers with whom they were connected.

British troops are periodically relieved from England and the Colonies, regiments ordinarily being some fifteen years in India, where they are kept on a war-footing by drafts sent from the regimental depots. Native troops consist of every warlike class, a great variety of races being found in the ranks. Gurkhas and Sikhs to a great extent, are organised in class regiments. There are Rajputs of both Oudh and the United Provinces; Jats, Dogras, Mahrattas, Pathans, Baluchis and Hazaras. Mahrattas are enlisted in Regiments of the old Bombay Army; Mahomedans from the south of India and from Hindustan are found in the ranks of many corps, and most of the Frontier tribes furnish their quotas.

The native officers generally rise from the ranks, but some are given direct commissions, although this system has not been largely adopted. The volunteers form a valuable and efficient body of men, who would be most useful in emergency, having a good knowledge of the use of arms and furnishing some of the best shots in the country.

The Military Police is largely composed of warlike races, especially in Burma, which is mainly garrisoned by these corps, while in Central India the aboriginal Bhils find employment in the ranks. These, however, though a useful auxiliary, do not form part of the Army, and serve under the orders of the Civil Government.

The Divisions of the Army are distributed as follows, their headquarters being at the Stations indicated.

Northern Army.	Headquarters-Murree.
1st Division ..	Peshawar
2nd ,, ..	Rawal Pindi
3rd ,, ..	Lahore
7th ,, ..	Meerut
8th ,, ..	Lucknow

Indian Brigades.		
Derajat Brigade	..	Dera Ismail Khan
Bannu Brigade	..	Bannu
Southern Army.		Headquarters—Ootacamund.
4th Division	..	Quetta
5th ,,	..	Mhow
6th ,,	..	Poona
9th ,,	..	Ootacamund
Burma Division	..	Mandalay

Services of the Sepoy Army.

The history of the Army of India has now been traced since its inception down to the present time. The military history of the world presents no more remarkable spectacle than that of the great army of soldiers of fortune which, led by a few British officers, has carried our flag into every corner of the Eastern Hemisphere during the past hundred and fifty years. Soldiers by birth and breeding the sepoys of Hindustan and of the four quarters of India have served the Empire from Northern China to Ceylon, from Egypt to the islands of the Eastern seas, in Belgium and in France. In the conquest of India itself, in seconding the valour of a handful ot British soldiers, they have borne a conspicuous part. The very men who opposed us so courageously in war—Sikhs, Gurkhas, Pathans of the North-West Frontier, Jats and Rajputs—have fought with no less valour in the ranks of our army. They sailed to the conquest of Bourbon, Mauritius and Java. With Cornwallis and Harris they traversed the passes which led them to Mysore and Seringapatam. Under Stringer, Laurence, Clive, Eyre Coote, Lake and Wellesley they helped to oust the French from Southern India. The great theatre of war in which they fought was diversified by every physical feature and characterised by considerable varieties of climate. From Chitral to Makran our soldiers have followed in the footsteps of Alexander the Great. On the banks of the Hydaspes, on the very ground where the Macedonians defeated Porus two thousand years before, they fought the battle of Chillianwala against the Sikhs, who have themselves since been among the bravest soldiers of our army. Every pass on the frontier traversed by the invaders of old contains the bones of brave men who have fallen in our service. The rude mountaineers of the frontier have eagerly entered the ranks of our army. Beyond the limits of India our soldiers have entered most of the capitals of the East. They have carried the flag to Cabul, to Cairo, to Lhasa, to Peking, to Ava and to Mandalay. Sepoys accompanied Baird, and eighty years later Wolseley, to the Nile. The dark page of the Mutiny is itself illumined by many gallant deeds performed in our service by the native soldiers of the Empire. Lucknow was not defended by Europeans alone; among the bravest men on the Ridge before Delhi were men of Indian races; in the glorious campaign in Central India 1858 the wings of Sir Hugh Rose's Army were composed of native cavalry; the mutiny veterans who tottered into the arena at the Coronation Durbar at Delhi had in their ranks many soldiers of native race.

The Army and the War.—In 1914, when the Great War broke out, H. E. the Viceroy, speaking on behalf of the whole country, pledged every man, British and Indian, to the service of the Raj, and a great force of all arms, estimated to reach 200,000, was despatched to the seat of war in France and Belgium, in East Africa, Egypt, Turkish Arabistan and Shantung. The Force in France constituted the only trained reserve available in the British Empire at the time. Its services therefore must be measured not only by what it did, but by the fact that it was the only force available for the duty. It took part in some of the hardest fighting, and this in the strange conditions of the cold, the wet and the mud of Flanders, in trench fighting, which was even more strange to the Indian troops than to those of the European armies, and under artillery fire which subjected them to an unprecedented strain. The gradual strengthening of the British forces and the pending advent of another winter induced a fresh consideration of the employment of these troops in France, and towards the close of 1915 it was decided not to subject them to the ordeal of another campaign in the European winter. The Indian Expeditionary Force was therefore withdrawn, with the exception of the Cavalry Division. It was re-constituted in Egypt and distributed for service either in India or on some other part of the battle front. One cavalry brigade was subsequently withdrawn. Before the Force left France, His Majesty the King-Emperor sent the following message, which was delivered by the Prince of Wales on November 21 and subsequently issued in the form of a communique:—

"Officers, non-commissioned officers and men of the Indian Army Corps,—More than a year ago, I summoned you from India to fight for the safety of my Empire and the honour of my pledged word on the battle-fields of Belgium and France. The confidence which I then expressed in your sense of duty, your courage and your chivalry you have since then nobly justified. I now require your services in another field of action, but before you leave France, I send my dear and gallant son, the Prince of Wales, who has shared with my armies the dangers and hardships of the campaign, to thank you in my name for your services and to express to you my satisfaction.

"British and Indian comrades in arms, yours has been a fellowship in toils and hardships, in courage and endurance, often against great odds, in deeds nobly done in days of an ever-memorable conflict In a warfare waged under new conditions, and in peculiarly trying circumstances you have worthily upheld the honour of the Empire and the great traditions of my army in India.

"I have followed your fortune with the deepest interest and watched your gallant actions with pride and satisfaction. I mourn with you the loss of many gallant officers and men. Let it be your consolation, as it was their pride, that they freely gave their lives in a just cause for the honour of their sovereign and the safety of my Empire. They died as gallant soldiers, and I shall ever hold their sacrifice in grateful remembrance. You leave France with a just pride in honour of the deeds already achieved and with my assurance of confidence that your proved valour and experience will contribute to further victories in the fields of action to which you go. I pray God to bless and

guard you and to bring you back safely when the final victory is won each to his own home, there to be welcomed with honour among his own people."

Lord French's Tribute.—The message which Viscount French issued to the Indian Corps was officially published in India, some six months later than that of the King. Lord French describes the British troops of the corps as having borne themselves in a manner worthy of the best traditions of the Army.

The Indian troops (he adds) have shown most praiseworthy courage under novel and trying conditions, both of climate and of fighting, and have not only upheld but added to the good name of the Army which they represent. This is all the more praiseworthy in view of the heavy losses among the British officers which deprived the Indian ranks of many trusted leaders whom they knew well, and of the fact that the drafts necessary to maintain your strength have frequently had to be drawn from regiments quite unconnected with the units they were sent to reinforce. You have done your work here well . . . I thank you for the services you have rendered while under my command, and trust that the united efforts of the Allies may soon bring the enemy to his knees and restore peace to the world.

A no less emphatic tribute, and one taking a wider sweep, was paid by the Secretary of State for India, when presiding at the lecture of Sirdar Daljit Singh, of the India Council, upon the Sikhs at a meeting of the Indian Section, Royal Society of Arts.

Mr. Chamberlain said that the Indian Army had served for the first time in a great European War; it had been employed not only in France, but in Egypt, in Gallipoli, at Aden, in East and West Africa, and in Mesopotamia. Wherever there had been work to do and stout hearts had been needed, India had sent her sons to play their part with the men of other portions of the Empire in defence of their Sovereign's Crown and of the liberties of the Empire to which they belong.

Statement by Lord Hardinge.—In July 1917, Lord Hardinge made a statement in the House of Lords showing the extent of the expeditionary forces sent from India. He said:—"In August and the early part of September an Indian Expeditionary Force of an Indian army corps of two divisions, under the command of General Sir James Willcocks, and one cavalry division was sent to France, and a second cavalry division was sent to join this force in the following November. It may be of interest to remark here that the theatre of action of these splendid Indian divisions was, in the first instance, restricted to the Mediterranean garrisons and the Sudan, and it was due to the insistence of the Government of India that they were sent to France, where they arrived in time to fill a gap that could not otherwise have been filled, and there consecrated with their blood the unity of India with the British Empire and their loyalty to the King Emperor. There are very few survivors of those two splendid divisions of infantry. But India has a land frontier, needing at all times a watchful eye, and at times such as these giving cause for special care. To guard that frontier three divisions were immediately mobilised. In September, 1914, by the order of his Majesty's Government, a mixed division of troops was sent to East Africa, the co-operation of India with this force being limited to the supply of personnel, transport, equipment and ships. In October and November 1914, two divisions of Indian infantry and one brigade of cavalry were sent to Egypt. It was not till September, 26, 1914, by which time eight divisions had already been mobilised and sent either abroad or to the frontier, that the possibility of action at the head of the Persian Gulf was foreshadowed by the Secretary of State, and it was on October 31 that, Turkey having entered the war against us, hostilities commenced with the seizure by an Indian brigade of the mouth of the Shatt-el-Arab. This brigade was reinforced to the strength of a division before the capture of Basra on November 23 and in three months' time increased to an army corps of two divisions. Of these 10 divisions of infantry and two divisions and two brigades of cavalry, enumerated above, seven divisions and all the cavalry were sent overseas. But in addition to these organised forces 20 batteries of artillery, and 32 battalions of British infantry, the flower of the British army, many of them 1,000 strong and more, were sent to England. A battalion of Indian infantry was sent to Mauritius, another to the Cameroons, and two battalions to the Persian Gulf, while Indian troops also co-operated with the Japanese at the capture of Tsingtau. Approximately 80,000 British officers and men and 210,000 Indian officers and men, all fully trained and equipped were despatched overseas. I would here remark that the largest Indian expedition ever previously sent overseas amounted to 18,000 men.

"A comparison between the ordinary establishment of the Army in India and of the units sent overseas in connexion with various expeditions shows in a striking manner the military effort made by India to assist the Empire. Of the British establishment in India, seven regiments of British cavalry out of nine were sent overseas; 44 British battalions of infantry out of 52, and 43 batteries of Royal artillery out of 56; while of the Indian establishment, 20 regiments of Indian cavalry out of 39 and 89 battalions of Indian infantry out of 138 were sent abroad. In return for these troops, India received many months after the outbreak of war and the despatch of Indian divisions overseas, 29 Territorial batteries and 34 Territorial battalions, but these were unfit for immediate employment on the frontier or in Mesopotamia until they had been entirely rearmed and equipped and their training completed. Many of them were sent later to Mesopotamia, whether as units or drafts for Regular regiments, and all did splendid service. It is, however, a fact that for the space of some weeks before the arrival of the Territorials the British garrison in India was reduced to about 15,000 men. The safety of India was thus imperilled in the interests of the Empire as a whole. In such a cause I was naturally prepared to take risks, and I took them confidently because I trusted the people of India, and I am proud to say they fully justified my confidence in them. From the moment of the outbreak of war, and after, it was the steady policy of the Government of

India to give readily to the home Government of everything it possessed, whether troops or war material. In the summer of 1914 India was absolutely ready for war in the light of what was then accepted as the requisite standard of preparation of her military forces and equipment. The Army was at war strength, the magazines were full, and the equipment was complete. Thanks to these facts, India was able, not merely to send her divisions to France and elsewhere, but also to supply to England within the first few weeks of the war 70,000,000 rounds of small-arm ammunition, 60,000 rifles and more than 550 guns of the latest pattern and type. In the first week of the war some 530 officers of the Army, who could ill be spared, were handed over to the War Office, and nearly 3,000 additional combatant officers have been sent overseas since the war began."

The Fighting Races.

The fighting classes that contribute to the composition of the Indian Army are drawn mainly from the north of India. Of these there are 35 squadrons and 214 companies of Sikhs, who thus furnish a great part of the strength of both Infantry and Cavalry. The Sikhs, of whom an account has already been given, are distributed throughout the Punjab. Mahomedans of various races contribute a still larger proportion to both arms. These are drawn both from the north and south of India, as well as from beyond the frontier, where the tribes contribute 56 companies to our Infantry; while the Musalmans and Pathans of India itself furnish between them 68 squadrons of Cavalry and 250 companies of Infantry. These are all excellent fighting men, hardy and warlike, who have furnished soldiers to all the great powers of India for many hundreds of years. Large numbers of Mahomedans were to be found in the ranks of the Mahratta armies which opposed us during the early part of the last century. As Cavalry the Mahomedans are perhaps unequalled by any other race in the East, being good horsemen and expert men-at-arms.

Next to these in point of numbers are the little Gurkhas of Nepal, of whom 161 companies serve in the ranks of the Infantry. These, with the exception of one company in the Guides, are formed in twenty complete battalions. As fighters in the hills, the Gurkhas are unsurpassed even by the Pathans of the North-West Frontier. Their proficiency as soldiers was first proved in the Nepal War of 1814, when they fought against us and has subsequently been displayed on many a field in the ranks of our army. The cheerful and steady discipline of the Gurkha has always rendered him a valuable soldier, while his proficiency in the use of arms, including the national *Kukri*, has made him terrible in war. While such a wonderful marcher in the hills, the Gurkha soon tries in the plains.

The professional military caste of India from time immemorial has been the Rajput, who inhabits not only Rajputana but the United Provinces and Oudh. Of fine physique and martial bearing, these warriors of Hindustan formed the backbone of the old Bengal Army, and have sustained the British flag in every campaign in the East. Their high caste and consequent prejudices in no way interfere with their martial instincts and efficiency in war. This class now furnishes 10 squadrons of Cavalry and 100 companies of Infantry in our Army. Other classes which are found in the ranks are Jats, Dogras, Brahmins and Mahrattas. The Jats are a fine and warlike race, found in the Delhi and Rohtak districts and adjacent territory. It was these people who held out so bravely at Bharatpur and repelled three attacks delivered against their stronghold by Lord Lake's army in 1805. They now furnish us with 21 squadrons of cavalry and 60 companies of infantry. Dogras are good and steady soldiers found in the hilly districts of Punjab. The ruling Chief of Kashmir is of this caste, of which are 11 squadrons and 56 companies in the army. Brahmins are not now largely enlisted; while the Mahrattas, famous as predatory horse in the historic past, now compose 54 companies of infantry. They are chiefly recruited in the Deccan and the Konkan. Nor must we forget the Hill Rajputs of Garhwal, good and gallant soldiers, who supply two battalions; and the low caste men of Madras so efficient as Pioneers and Sappers. Some 9,000 Madrasis are still in the ranks.

New Regiments.—In 1916 two important steps were taken. In response to a strong desire manifested, the Government accorded sanction to the raising of an **Anglo-Indian Regiment.** By Anglo-Indian it should be understood that a change in nomenclature was made in the Census of 1911. The term Anglo-Indian used to connote the Englishmen resident in India: by the census it was made to embrace what used to be called the Eurasian, or Domiciled community, terms which have now passed into desuetude. Recruiting proceeded all over the country and the men enlisted were sent to Quetta to be trained. In October, 1917, the Hon. Secretary, Federal Council Anglo-Indian Associations of India, stated that the Adjutant-General in India had made the following report:—"I am directed to say that the General Officer Commanding Force 'D' has reported favourably on the services rendered by Anglo-Indian Units employed in Mesopotamia, and has stated that he would be glad to have more of them, if available. In these circumstances I am to request that you will use every endeavour to accelerate recruitment of Anglo-Indians with a view, if possible, to the formation of new units. There is no objection to members of the Indian Defence Force (if eligible) joining the Anglo-Indian Force, and all Recruiting Agents should be instructed to approach such members with a view to their enlistment."

In August, a Bengali double company was raised. Since the advent of the British to India if not before, the Bengalis have not been reckoned amongst the fighting races and recruiting has not been practised. This exclusion during the war aroused protest, and at Dacca on August 7th, Lord Carmichael, Governor of Bengal, made the following announcement:—

"The Viceroy has been considering the position with the Commander-in-Chief and other members of his Government. They have determined to try as an experimental measure to raise a double company of infantry composed of Bengalis on precisely the same terms as are offered to the Indian Army generally. The

enlistment will be for the period of war with option to the soldier of remaining if he chooses in the service after its conclusion. The double company when formed will be located on the frontier for training and when properly trained may be sent on field service. That the Government of India should be willing to consider this now, while the war is going on, shows that they have not neglected the feelings of Bengal, that they should be willing to make an experiment is a proof that they do sympathise with us, that they do believe that Bengalis are loyal and are devoted. Surely it is the duty now of every one who loves Bengal, to see that the experiment shall succeed, to show that emotional and impetuous as the Bengalis undoubtedly are, they are generous enough to exercise self-control, that they are ready to submit to discipline and will do their part when asked just as well as other people do their part without demanding any exceptional or better terms"

The Bengalis had already raised an Ambulance Corps, which did good service in Mesopotamia. The announcement was received with general satisfaction, and the required number of men was readily forthcoming.

Central Recruiting Board.—Since the outbreak of war recruiting in India has expanded to very great dimensions and now deals with the manifold classes of men required for the several theatres of a great war. The Adjutant-General has now not only to keep existing establishments up to strength, but to form new units of combatants, to enrol labour corps for France or for Mesopotamia and to enlist railway men, dock-yard hands and marine ratings. Besides all those classes of skilled labour, whose services are necessary to the feeding, the transport and the communications of modern armies, the adequate fulfilment of these tasks has become too heavy for mere departmental management. Consequently in order to organize the man power of India more effectively to meet the growing demands made upon it the Governor-General in Council constituted in July, 1917, a central recruiting board of which the Hon. Sir William Meyer accepted the presidency. The other members are His Honour the Lieutenant-Governor of the Punjab, Their Highnesses the Maharajah Scindia of Gwalior and the Maharajah of Bikanir (who have been specially appointed as recruiting will extend to Native States), the Hon. Sir Claude Hill, the Hon. Sir William Vincent, Lieutenant-General H. Hudson, Adjutant-General in India and the Hon. Major-General A. H. Bingley, Secretary to the Army Department.

The Boards' functions may be summarized as follows :—

(1) The consideration of our requirements in military personnel of every description, combatant and non-combatant, and how these requirements can best be met.

(2) Consideration of how the quotas required can be best distributed among the several provinces.

(3) Co-ordination of recruitment so as to ensure that the demands for military services shall conflict as little as possible with essential industrial and economical requirements.

(4) A close scrutiny of the progress of recruitment and a consideration of schemes for meeting the necessary or potential demands for recruitment in regard to which the present system may seem inadequate.

(5) To ensure, in short, that the prosecution of the war is not hampered by any avoidable deficiency in man power.

To enable the board to watch the progress of recruiting and to ensure the co-operation of the military and civil authorities throughout the country local Governments have been asked to form provincial recruiting boards containing a large civilian and non-official element in the shape of landowners, business men and leaders of public opinion. These provincial boards help to keep the central board in touch with every aspect of the question.

Commissions for Indians.—In August, 1917, it was announced that His Majesty's Government had decided to remove the bar which had precluded the admission of Indians to commissioned rank in His Majesty's Army. A few days later the following Indian gentlemen, in recognition of their war services, were granted commissions and posted to the Indian Army units shown :—Captain Zoravar Singh, M.C., A.D.C., 1st Duke of York's Own Lancers, Captain Kunwar Amar Singh, 2nd Lancers (Gardener's Horse), Captain Aga Kassim Shah, 3rd Skinners Horse, Captain Khan Muhammad Akbar Khan, 1st Brahmans; Captain Malik Mumtaz Khan, 4th Cavalry; Captain Kunwar Pirthi Singh, 5th Cavalry; Captain Bala Saheb Daphle, 2nd Queen Victoria's Own Rajput Light Infantry; Lieut. Rana Johda Jan Bahadur, M.C., A.D.C., 3rd Brahmans; Lieut. Kunwar Sawai Singh, 4th Prince Albert Victor's Rajputs.

Improvements in Conditions.—Many improvements have been made in the pay of the soldier and the conditions of service. They are thus summarised in the Report on the Moral and Material Progress of India for the decade 1901-02 to 1911-13. The decade began with an increase of the pay of British troops due to the adoption in India of the proposals of the Home Government for an increase of 2*d.* a day from the 1st April 1902. This involved an additional charge on Indian revenues of some £225,000 a year. In April 1904 a further increase of from 4*d.* to 7*d.* a day, was given in the form of service pay. The whole of the service pay issued in India was in accordance with the decision of the Lord Chief Justice, acting as arbitrator between the Imperial and Indian Governments, borne by the latter, the extra charge being thus raised to about £700,000 a year. From the 1st January 1909, in accordance with the intention announced in the Proclamation of the King Emperor on the fiftieth anniversary of the transfer of Government to the Crown, a general increase of pay for all ranks was granted to the Indian Army, and arrangements were made for the free supply of fuel by Government at a cost of £427,000 a year. The increase was Rs. 3 a month for non-commissioned officers and men of the silladar cavalry and Rs. 2 for other troops. Other measures that may be noticed were the raising of the kit-

money granted on enlistment and the introduction of a boot allowance, the grant of free grass to silladar cavalry when on the march or at manœuvres and of free passages by rail (within certain limits) for men called home on urgent private affairs—all introduced in 1906; the revision and improvement of the pension rules of the Native Army, and the abolition of the punishment of flogging in time of peace, except for offences for which that punishment is permissible in civil life, in 1907-08; and a revision of the rates of pay of captains and subalterns of the Indian Army, and of regimental salaries, involving a considerable addition to the emoluments of the junior grades in 1909. Since 1910, considerable progress has been made with the improvement of the accommodation for the native troops. It had become obvious that this improvement was a matter of urgency in many cases, and with the persistent rise in prices and wages comfortable and durable buildings could no longer be constructed without a considerable increase of expenditure. In the new lines, a sound type of construction has been adopted, and the work has been entrusted to the Military Works Service instead of to regimental agency. Finally a bonus of half a month's pay, was granted to all non-commissioned officers, and men and reservists of both the British and Indian armies, and to the equivalent ranks of the Royal Indian Marine, at the Coronation Durbar in 1911, at a cost of about £166,000. On the occasion of the Coronation Durbar of 1902, a money grant to be spent at the discretion of officers commanding was made to all British and native troops.

Reserves.

The Indian Army Reserve dates from 1886. Under existing arrangements, it consists of men with not less than three years' colour service. Men passing into the Reserve still belong to their respective regiments, and come up for two months' training once in two years. In 1904 when the strength of the Reserve was about 24,500 men, it was decided to raise it gradually to 50,000 men, reducing the reserve pay from Rs. 3 to Rs. 2 a month, and also to form an Indian cavalry reserve by extending the system to Silladar cavalry regiments. Reservists obtain a pension after 25 years' total service. There is a body of reserve officers whose numbers were largely increased soon after the outbreak of the war.

Reserve of Officers.—For some years there has been entertained what was called The Indian Army Reserve of Officers—a small body of trained officers who would be available to replace the casualties amongst the British officers serving with the Indian troops in time of war. This branch of the service was however grievously neglected; the conditions of service were unattractive, the prospects of promotion were practically nil; and the military authorities preferred to rely on the expedient of multiplying the number of British officers serving with Indian troops in order to meet casualties, rather than to train up an effective reserve. This policy tested by the war was found wanting. The casualties amongst the British officers with the Indian regiments were very large indeed; these regiments lost their initiative when deprived of the officers on whom they had been taught to rely, and it was impossible to make the great gaps good from the ordinary officer class, because of their lack of knowledge of the Indian languages and Indian conditions. An appeal for recruits for the Indian Army Reserve of Officers met with a very ready response. The first enrolments reached the substantial figure of fourteen hundred, a very large proportion of whom were drawn from the Volunteer Officers, or from the ranks of special corps like the Light Horse, who are ordinarily recruited from the officer class. The officers selected were put through a rapid course with British and Indian regiments; made to pass a language test, and when efficient were sent to serve with the Indian regiments at the front. They have done excellent service and have suffered many casualties; indeed, without this reinforcement of officers specially acquainted with Indian conditions, the efficiency of the Indian Regiments could not have been maintained. It is understood that the numbers are now being raised to between two and three thousand.

The Imperial Service Troops.

The voluntary movement towards co-operation in the task of Imperial defence that led to the formation of the force of Imperial Service Troops was initiated in 1887 by an offer made by the Nizam of Hyderabad, whose example was at once followed by a number of the leading Native Princes. The troops, which are under regular inspection by British Officers, though available for Imperial service when placed at the disposal of the British Government by their Rulers, belong to the States and are recruited from their subjects. Their armament is the same as that of the Native Army, and in training, discipline, and efficiency they have reached a high standard of excellence. They have done good service on the North-West Frontier and also in China and Somaliland. At the beginning of the decade (1901-02 to 1911-12) twenty-three States between them supplied a total of over 16,000 men. Some additional offers of contingents have since been accepted, and the total strength is approximately 22,271, towards which twenty-nine States contributed. The total included some 10,000 infantry, and 7,500 cavalry, while transport and camel corps contributed 2,700 and 700 men respectively. Sappers also numbered about 700. Gwalior contributes nearly 4,000 men, and Kashmir over 3,500; Patiala, Hyderabad and Alwar contribute over 1,000 each. On the outbreak of the war practically the whole body of Imperial Service Troops were immediately placed at the unfettered service of the King-Emperor. Many of these offers were gratefully accepted and large bodies of Imperial Service Troops proceeded to one or other of the theatres of the war.

The Imperial Cadet Corps.

The Imperial Cadet Corps was founded in 1901, with the object of providing military training for the scions of ruling and noble families. The Corps consists of about 20 young men of noble birth who have been educated at the Chiefs' Colleges. The course of instruction lasts between two and three years, and the cadets are taught military exercises and military science. Its headquarters are at Dehra Dun.

THE INDIAN DEFENCE FORCE.

For some time before the war began it was realised that the Volunteer system in India was unsatisfactory, and the war made that realisation all the more acute. Chambers of Commerce and other bodies passed resolutions in favour of some form of compulsory service for able-bodied Europeans, but none of the schemes suggested, either for the improvement of the Volunteers or for the creation of a new body, was very definite, nor indeed could it be, owing to the absence of any definite pronouncement by the Government of India as to the function which the Volunteers were supposed to perform in war and peace. It is true that from the outbreak of the war the Volunteers were freely used, especially in Bombay, for a variety of duties normally performed by garrison troops, such as embarkation work and later on for escorting prisoners to Ahmednagar. Volunteers joined the Army and the Indian Reserve of Officers in large numbers, a Volunteer Battery went to Mesopotamia and a Volunteer Maxim gun section went to East Africa; but of the force as a whole no use was made and no compulsory use could be made so long as Section 16 of the Indian Volunteers' Act, which prescribed local limits of service, remained in force.

By the beginning of 1916, however, the gradual withdrawal from India of European troops made it necessary to endeavour to form some scheme by which the Europeans remaining in the country could be employed for its defence. How many Europeans in India were fit to bear arms was not known, nor did the most recent Census figures afford any clue as large numbers had left since August, 1914, and their places were not being filled from England. The first step therefore towards the desired end was the registration of Europeans, and on February 2nd, the **Registration Ordinance**, 1917, was published. By that Ordinance every male European British subject (as defined in the Criminal Procedure Code, 1898) between the ages of 16 and 50 was compelled to register his name; place of residence; date of birth; whether single, married or widower; number of dependents, if any; profession or occupation, if any, name of business, address of employer, if any, and nature of employer's business; whether the work on which he was employed, if any, was work for or under any Government department; whether he had undergone military or naval training of any description, if so what and for what period.

European British Subject.—According to section 4 (1) of the Code of Criminal Procedure, European British subject means:—(1) Any subject of His Majesty, born, naturalised or domiciled in the United Kingdom of Great Britain and Ireland or in any of the European, American or Australian Colonies or possessions of His Majesty or in the Colony of New Zealand or in the Colony of the Cape of Good Hope or Natal, (2) any child or grandchild of any such person by legitimate descent. That definition, as will be seen later, was amended before the passing of the Indian Defence Force Act.

Exception.—Persons in the following categories were non-liable to register but might be called upon to support their claims to such non-liability:—persons not ordinarily resident in British India; members of His Majesty's naval and military forces other than volunteers enrolled under the Indian Volunteers Act, 1869; persons in Holy Orders or regular ministers of any British denomination; persons who have at any time since the beginning of the war been prisoners of war, captured or interned by the enemy or have been released or exchanged.

Failure to comply with the Ordinance is punishable with a fine which may extend to Rs. 500, and failure to notify change of address within seven days is punishable with fine which may extend to Rs. 200.

Registration authorities.—It was provided by a schedule to the Ordinance that these authorities should be in the case of any person in Government employ the head of the department; in the case of any person in the employ of any public authority the chief executive officer of such authority; in the case of any person in the employ of any railway the head of the railway administration; in any other case where no special authority is prescribed the District Magistrate of the district where the person for the time being is resident, or, in the case of a person resident in a presidency town, the Commissioner of Police.

The Bill introduced.—The process of registration was carried out with little difficulty and but few cases of prosecution for failure to register were reported in the Press. Shortly afterwards the Indian Defence Force Bill was introduced (for the full text of the Act, see at the end of this article) and on that occasion **H. E. the Viceroy** explained that volunteering was a broken reed and that there must be equality of sacrifice. "It is useless, he said, to spend money on a military force which is bound to be ineffective under the condition and the nature of its existence, so this new force will come under the provisions of the Indian Army Act. It is intended to be an effective military organisation as the British element under this Act is to be dealt with on the same lines as those of the British regulars, so the Indian element will come under the same military conditions which apply to the Indian regular forces, saving the fact in both cases that service is to be within India. I do not think it necessary for me to labour this point. We cannot play at soldiers in these times, nor I hope shall we play at soldiers at any future time."

In introducing the Bill **H. E. the Commander-in-chief** stated that the service companies would for all intents and purposes be regular units for the time being, and would be clothed, equipped, rationed, and paid as regulars. They would relieve regular units on garrison duty and would be stationed anywhere in India where they might be required. He hoped that their work would be reckoned officially as war service.

In conclusion he said that "though the Indian Defence Force will be a second line force

it will be in no sense a second rate force. For, we mean to make it a model of its kind. Its members must realise that we are dealing now with serious soldiering and that personal convenience and other considerations must yield to military efficiency, and to the creation of a spirit of discipline upon which that efficiency so largely depends. The old volunteer force has become an anachronism, it has been replaced at Home by the Territorial Force, and will now be replaced in India by a Defence Force designed to suit local requirements whose development and progress will be watched with the keenest interest."

European British Subjects.—The main alteration in the Bill suggested by the Select Committee to which it was referred related to the definition of the term "European British Subjects." It was proposed originally to define that phrase as in the code of Criminal Procedure, but the Committee made it more comprehensive. It retained the referential definition contained in the Bill and brought within the scope of the definition two other classes of persons, namely, persons who within the prescribed period have asserted the status of a European British Subject by lodging form (*a*) with the Registration authority under the Registration Ordinance, 1917, and persons who are members of a Volunteer corps constituted under the Indian Volunteers Act, 1869. "In the first case, said the Committee in their report, the person concerned has himself put forward a claim to the status which should not lightly be refused, and in the second case the justification for such a course is that a person who has undergone some form of military training at the expense of the state may well be required to aid that state in the time of need. By this amendment we consider that a considerable extension will be given to the ambit of the definition, and though the change might not commend itself if we were undertaking normal legislation in normal times, we think that at the present juncture it is justifiable." The effect of this change was to include in the Force a number of Goanese and other aliens who had previously been members of the Volunteer Force many of whom were subsequently exempted by the Tribunals from liability to General Service.

Exemption Tribunals.—Hasty drafting of the Bill led to not a little confusion and particularly was this noticeable in the proceedings of the Exemption Tribunals. The grounds on which they could grant exemption were sufficiently clear but what was or was not in the "national interest" was a frequent source of discussion. Nor were the duties of the Selection Committees (which select the men required at a given time for General Service) at first clearly laid down, and it was not until the Tribunals realised that a Selection Committee had power to refuse to select as well as power to select a given man that anything like uniformity of procedure became noticeable among the various Tribunals. But by that time some of the more lenient Tribunals, that in Calcutta more particularly, had either totally or partially exempted numbers of men who would have had little chance of obtaining any form of exemption from those Tribunals which more fully realised the gravity of the circumstances which had made the passing of the Indian Defence Force Act necessary.

The response of **Indians** to the invitation to enrol themselves in the Defence Force was from the first poor. Objection was taken to the terms offered and to the distinction made between Europeans who were compelled to serve and Indians who were only asked to gratify their frequently expressed longing to join the Volunteer force. In May the Government of India issued a resolution on the subject in which they noted with concern the disappointing response made to their appeal and recapitulated the circumstances in which the scheme was initiated. It is, said the Resolution, "a matter of disappointment to the Government of India to find that during the first two months after the passing of the Act only 300 men have been enrolled in place of the 6,000 for which preparations were made. It is felt that all who take an interest in the Defence Force and believe those sentiments of patriotism which have brought it into being, and who have the good name of India at heart will be disheartened to learn that out of the six months for which recruiting is open so much time should have elapsed without any adequate response being made." At the end of August, instead of 6,000 being enrolled as a preliminary step in six battalions, only 3,803 had applied to be enrolled. In September, when the Hon. Mr. Sarma moved in Council that the period of applications for enrolment should be extended, the Commander in-Chief said the final figures were 5,634 which, allowing for rejections, were as many recruits as could well be drilled. After some months the question of increasing the force might be reconsidered.

Conditions of Service.—The conditions under which Indians were invited to serve were those applying to His Majesty's Indian Forces in the Regular Army, and, as periodical training was not demanded of those enrolled, were far less onerous than the terms imposed on Europeans in India. The Resolution already quoted said on this point:—"The leaders of Indian opinion are doubtless aware that the pay of the Territorial force in England was the same as that of the regular army, and that men of position and means in the United Kingdom and even in distant parts of the Empire did not think it derogatory to join the ranks both of the Territorials and of the New Army and to serve as private soldiers shoulder to shoulder with those of other classes, and many of them have given their lives in such service in France and elsewhere during the present war. They asked no questions as to pay or other conditions, they put forward no pretensions or demands; their one ambition was to serve their country in her hour of need and their memories will ever be honoured by the nations in whose defence they fought. The Governor-General-in-Council was assured that a similar ambition prevailed in India, and that it was only necessary to throw open the ranks of the Defence Force to Indians to secure a hearty response. At a time when military organisations are strained to the uttermost it was not possible to provide for the training of an indefinite number of small units all over the country on such a scale as to place a newly constituted force of this character upon an efficient basis."

Act No. III of 1917.

[28th February 1917.]

An Act to constitute an Indian Defence Force and for other purposes.

Whereas it is necessary to constitute an Indian Defence Force, and compulsorily to enrol for service in that Force certain European British subjects; and

Whereas in the case of others, it is deemed sufficient for the present to take power to enrol for such service only such persons as may offer themselves for enrolment; it is hereby enacted as follows:—

Short title, extent and duration.

1. (1) This Act may be called the Indian Defence Force Act, 1917.

(2) It extends to the whole of British India, including British Baluchistan and the Sonthal Parganas, and applies also to European British subjects within the territories of any Native Prince or Chief in India.

(3) It shall remain in force during the continuance of the present war, and for a period of six months thereafter.

Definitions.

2. In this act, unless there is anything repugnant in the subject or context—

"European British subject," means a European British subject as defined in the Code of Criminal Procedure, 1898, and shall, for the purposes of this Act, be deemed to include every person who, before the third day of March, 1917, has filled up, signed and lodged Form A with the Registration Authority under the Registration Ordinance, 1917, and also every person who at the commencement of this Act is a member of a corps of volunteers constituted under the Indian Volunteers Act, 1869;

"Prescribed" means prescribed by rules made under this Act.

Obligation of general military service.

3. Every male European British subject who, on the first day of February 1917, was ordinarily resident in India or thereafter becomes so resident, and who for the time being has attained the age of eighteen years and has not attained the age of forty-one years and who is not within the exceptions set out in the Schedule to this Act, shall be deemed to be enrolled for general military service within the meaning of this Act:

Provided that, if any person referred to in this section whilst engaged in actual military employment of which fact the Commander-in-Chief in India shall be the sole judge, attains the age of forty-one years, such person shall continue to serve for such additional period not exceeding one year as the prescribed military authority may direct.

Obligation of local military service.

4. Every male European British subject who on the first day of February, 1917, was ordinarily resident in India, or thereafter becomes so resident, and who for the time being has attained the age of forty-one years but has not attained the age of fifty years, and who is not within the exceptions set out in the Schedule to this Act, shall be deemed to be enrolled for local military service within the meaning of this Act.

Obligation of local military service and liability to military training.

5. Every male European British subject who, on the first day of February, 1917, was ordinarily resident in India, or thereafter becomes so resident, and for the time being has attained the age of sixteen years, but has not attained the age of eighteen years, shall be deemed to be enrolled for local military service, but shall only be liable to such military training as may be provided for by regulations made under this Act, and shall not be liable to any other form of military service.

Obligation on persons enrolled for military service.

6. Every person deemed to be enrolled for military service, whether local or general, shall, as from the commencement of this Act, be deemed to be enrolled in the Indian Defence Force, and may be appointed to such corps or unit thereof as he may thereafter be assigned to, and shall, if he is a person deemed to be enrolled for general military service, be liable to serve in any part of India.

Obligation on persons enrolled for local military service.

7. Every person deemed to be enrolled for local military service shall be subject to any rules and regulations relating to that service which may be made under this Act:—

Provided that no such rule or regulation shall require any such person to serve outside the limits of the prescribed local area.

Obligation on persons enrolled for general military service.

8. (1) Every person deemed to be enrolled for general military service shall be subject to any rules and regulations relating to that service which may be made under this Act.

(2) Every such person, whe called out in the prescribed manner for general military service shall be subject to the provisions of the Army Act and any orders or regulations made thereunder, whereupon the said Act, orders and regulations shall apply to him as if the same were enacted in this Act, and as if such person held the same rank in the Army as he holds for the time being in the Indian Defence Force.

Determination of disputes as to residences and age.

9. If any question arises, with reference to this Act, whether any person is a European British subject within the meaning of this Act or is "ordinarily resident" in British India, or is within the exceptions set out in the Schedule or as to the age of any person, the prescribed authority, or a person authorized in this behalf in writing by that authority, shall apply to the District Magistrate or to an officer specially empowered in this behalf by the Local Government, in the district or local area in which the person to whom the dispute relates is for the time being, and such Magistrate or other officer after hearing such person or giving him a reasonable opportunity of being head, shall summarily determine the question, and the decision of

such Magistrate or other officer shall be final for all the purposes of this Act:

Provided that if any question referred to in this section has been decided in accordance with the procedure provided in the Registration Ordinance, 1917, such decision shall be deemed to be a decision under this section of this Act.

Arrest of persons under obligation for military service.

10. If any person who is deemed to be enrolled for military service, whether local or general, disobeys any notice or order calling him out for such service, any District or Chief Presidency Magistrate may, on the application of the prescribed authority, or of a person authorized in this behalf in writing by that authority, cause such person to be arrested and brought before him, and if the Magistrate is satisfied that he is a person to whom Sections 3, 4 or 5 of this Act applies, and who has been called out for such service, the Magistrate without prejudice to any penalty which such person may have incurred shall make over such person to the custody of the military authorities.

Certificate of exemption.

11. (1) Application may be made to the prescribed authority by, or (subject to rules made under this Act) in respect of, any person referred to in Sections 3, 4 or 5, for the issue to him of a certificate of exemption under the provisions of this Act on any of the following grounds, namely:—

(*a*) that it is expedient in the national interest that he should instead of being employed in military service be engaged in other work; or

(*b*) if he is being educated or trained for any work that it is expedient in the national interest that he should continue to be so educated or trained; or

(*c*) ill-health or infirmity;

and the prescribed authority, if it considers the grounds of the application established, shall grant such a certificate.

(2) The Governor-General in Council may also, by order in writing direct the issue to such persons or class of persons, as he thinks fit, of certificates of exemption if he is satisfied that such a course is desirable in the national interest.

(3) Any certificate of exemption may be absolute, conditional, or temporary, and may be renewed, varied or withdrawn at any time by the authority which granted it, and may provide that a person liable to general military service shall perform local military service:—

Provided that every conditional or temporary certificate shall state the conditions under which or the period for which it is granted.

(4) If, for the purpose of obtaining exemption for himself or any other person, or for the purpose of obtaining the renewal, variation, or withdrawal of a certificate, any person makes a false statement or false representation, to any authority under this section, he shall be punishable with imprisonment for a term which may extend to six months, or with fine or with both.

Enrolment of persons other than European British subjects in the Indian Defence Force for general military service.

12. (1) The Governor-General in Council may, by notification in the "Gazette of India," constitute, in any local area which he may specify in the notification, corps or units for the enrolment in the Indian Defence Force of persons other than European British subjects, who satisfy the prescribed conditions and, within six months from the commencement of this Act, offer themselves for enrolment for general military service, and such persons may be enrolled accordingly in the prescribed manner.

(2) Every person enrolled in a corps or unit constituted under Sub-Section (1) shall be liable to serve in any part of India, shall be subject to all rules and regulations that may be made under this Act relating to his corps or unit, and shall not quit such corps or unit, except in the prescribed manner.

(3) Every such person shall, when called out in the prescribed manner for general military service, be subject to the Indian Army Act, 1911, and the rules made thereunder, whereupon the said Act and rules shall apply to him as if he held the same rank in the Indian Army as he holds for the time being in the Indian Defence Force.

Power to make rules.

13. (1) The Governor-General in Council may make rules to carry out the purposes of this Act.

(2) In particular and without prejudice to the generality of the foregoing power, such rules may—

(*a*) prescribe authorities for the purposes of Sections 9 and 10;

(*b*) constitute authorities and prescribe the procedure of such authorities for the purpose of considering applications for exemption from military service;

(*c*) prescribe the time within which, and the form in which, such application may be made, and the persons other than the person to be exempted by whom it may be made;

(*d*) prescribe the conditions subject to which persons other than European British subjects should be permitted to offer themselves for general military service;

(*e*) prescribe the military or other obligations to which persons or any class of persons enrolled or deemed to be enrolled under this Act shall respectively be liable; constitute or specify Courts for the trial and punishment of breaches of such obligations; prescribe the procedure to be followed by such Courts; and provide for the enforcement or carrying out of the orders or sentences of such Courts;

(*f*) provide for the medical examination of persons liable to general military service;

(*g*) provide for the calling out and all purposes ancillary thereto of persons or any class of persons liable to general military service, and constitute authorities for the purpose of assisting in the selection of persons to be so called out; and

(*h*) provide for any matter in this Act directed to be prescribed.

(3) Rules made under this section may provide that any contravention thereof or of any order or notice issued under the authority of any such rules shall be punishable with imprisonment for a term which may extend to six months, or with fine or with both.

(4) All rules made under this Act shall be published in the "Gazette of India", and on such publication shall have effect as if enacted in this Act.

Summary and minor punishments.

14. (1) The Commander-in-Chief in India may, subject to the control of the Governor-General in Council, specify the summary and minor punishments for breach of any rule made under this Act to which persons enrolled or deemed to be enrolled under this Act shall be liable, without the intervention of a Court, and the officer or officers by whom and the extent to which such summary and minor punishments may be awarded.

(2) No punishment exceeding in severity imprisonment in military custody for a period of seven days shall be imposed as a summary punishment, and no punishment involving any kind of imprimsonment shall be imposed as a minor punishment.

Power to make regulations.

15. (1) The Commander-in-Chief in India may make regulations providing generally for all details connected with the organization, personnel, duties, and military training of any persons liable to military service or training under this Act.

(2) In particular and without prejudice to the generality of the foregoing power, such regulations may—

(*a*) specify the units, whether of regular troops or any other military force with which any person or class of persons enrolled or deemed to be enrolled under this Act shall serve or undergo military training, or constitute special military units for that purpose;

(*b*) specify the courses of training or instruction to be followed by any person or class of persons liable to military service or training under this Act; and

(*c*) provide for and regulate the remuneration, allowances, gratuities or compensation (if any) to be paid to any person or class of persons undergoing military service or training under this Act or to their dependants.

(3) Regulations made under this section may provide that any contravention thereof, or of any order or notice issued under the authority of any such regulation, shall be punishable with fine which may extend to five hundred rupees.

Act not to apply to persons confined in a prison or lunatic asylum.

16. Nothing in this Act shall apply to any person confined in a prison or lunatic asylum.

Power to disband corps or unit.

17. The Governor-General in Council may disband any corps or unit constituted under this Act.

Provisions of Registration Ordinance, 1917, continued in force.

18. The provisions of the Registration Ordinance, 1917, shall be in force during the continuance of this Act, and shall have effect as if they had been enacted in this Act:

Provided that the following amendments shall be made therein, namely:—

(1) In Section 3, Sub-Section (1), of the said Ordinance, for the words "had not attained the age of fifty years on the first day of February, 1917," the words "who for the time being has not attained the age of fifty years," shall be substituted.

(2) In Schedule II of the said Ordinance in entry (1) after the word "forces" the words "or of the Royal Indian Marine Service" shall be inserted, and in entry (2) for the word "British," the word "religious" shall be substituted.

THE SCHEDULE.

(SEE SECTIONS 3 AND 4.)

Exceptions.

(1) Members of His Majesty's naval and military forces of the Royal Indian Marine Service other than Volunteers enrolled under the Indian Volunteers' Act, 1869.

(2) Persons in Holy Orders or regular Ministers of any religious denomination.

(3) Persons who have at any time since the beginning of the war been prisoners of war, captured or interned by the enemy, or have been released or exchanged.

MILITARY FLYING SCHOOL.

The Government of India sanctioned the establishment of an India Central Flying School, at Sitapur, with effect from the 1st October, 1913; but the work of the school has been suspended during the war. The object of this school is to gain experience in aviation under Indian conditions with a view to its ultimate expansion as a training establishment. The Commandant has entire control of the school under the direct orders of Army Headquarters to the Ordnance Branch, of which an Assistant Director of æronautics was appointed in July, 1916, to deal with and advise on all matters connected with æronautics. The school consists of a commandant and three flying officers with the necessary medical and subordinate *personnel*. The British and Indian subordinate staff consists of civilians only engaged on contract for specified periods.

Conditions of appointment.—The qualifying conditions of appointment for the commandant, and flying officers, are as follows:—

(1) To hold a Royal Aero Club's pilot certificate; (2) to be recommended by his Commanding officer; (3) medical fitness (as stated below); (4) not less than two years' service (British service), three years' service (Indian Army). In addition Indian Army officers must have qualified for "final retention"; (5) not above the rank of Captain; (6) a natural bent for the mechanical; (7) and to be unmarried.

Officers are appointed to the staff of the school for a period of four years from the date of joining, the appointment being probationary for the first six months, they will be seconded in their regiments. An officer who is found at any time to be unfitted for the duties of the appointment will be required to rejoin his Regiment. If injured on flying duty the Commandant and flying officers will be eligible for gratuities and pensions under the conditions and at the rates laid down in Army Regulations, India, Volume 1, Paragraph 748 *et seq.* For officers who have been wounded in action in the event of death within seven years as the result of injuries so received pensions, etc., may be awarded under the conditions applicable to the case of officers killed in action or dying of wounds received in action.

Equipment.—The Maharaja of Rewah has generously presented an aeroplane to the Central Flying School. This is of Royal Aircraft factory design and has a 70 h. p. Renault air cooled motor, giving a machine speed of 72 miles per hour. Other machines consist of two 80 h. p. Gnome and two Maurice Farman biplanes (70 h. p. Renault). The school possesses a portable hangar which will remain erected on the aerodrome until permanent sheds are ready for occupation. The portable hangar will then become available for housing machines. The aerodrome at Sitapur is in area roughly of 400 acres. The first flights were made on February 24, 1914, when a Rewah aeroplane was used and each officer flew in turn for a short time.

Staff of the school.—The staff of the Indian Central Flying School normally consists of:—1 Commandant at Rs. 1,200 per mensem and 3 flying officers at Rs. 800 each per mensem.

British Subordinates: 1 engineer, 1 sailmaker, 2 machinists, 2 riggers, and 1 repair shop mechanic.

Indian Subordinates: 1 carpenter, 1 sailmaker, 6 fitters, 2 riggers, 2 repair shop mechanics, and 1 storekeeper.

ARMY.

The established strength of the European and Indian armies in India for 1915-16 (exclusive of Indian artificers and followers) was: European army, 2,291 officers and 72,475 warrant and non-commissioned officers and privates; Indian army, 3,197 European officers and non-commissioned officers and 159,858 native commissioned and non-commissioned officers and privates, or a total establishment of 237,821.

During 1915-16 the army of India was engaged in operations of war in France and Belgium, West Africa, East Africa, Egypt, Somaliland, Aden, Mesopotamia, Persia, and on the North-West Frontier of India.

The net expenditure on the army in 1915-16 was £17,876,836 for effective charges and £3,076,421 for non-effective charges, or £20,953,257 in all, as against £19,240,368 in 1914-15. In addition, £772,332 (net) was spent on military works and £13,514 on special defences.

The expenditure covered the full ordinary maintenance cost of the troops, &c., employed with the overseas Indian Expeditionary Forces, as, in accordance with parliamentary resolutions, Indian revenues continue to bear ordinary pay and other charges of these troops.

Health of the British and Indian Armies.—The following table shows the sickness and mortality of the British and Indian troops (excluding officers) in India. During 1915 the death-rate of the British troops in India showed a further rise over the rate for 1914, and over the rate for 1913, which was the lowest on record. There was a further rise in the admission rate. For the Indian troops both death-rate and admission rate show an increase. These increases are no doubt in large part due to the treatment in India of troops evacuated sick from Expeditionary Forces.

	Ratio per mille of strength.							
	British Troops.				Indian Troops.			
	Average 1908-12.	1913.	1914.	1915.	Average 1908-12.	1913.	1914.	1915.
Admissions into hospital.	638·4	580·5	614·1	823·1	578·3	531·7	566·5	744·4
Constantly sick ..	60·3	29·7	31·8	39·1	20·9	21·4	20·9	33·9
Deaths	6·1	3·3	4·3	5·95	5·4	4·0	4·2	8·55

MARINE.

The net expenditure on marine services amounted to 744,600 in 1916-17 as against 745,513 in 1915-16. In this amount are included the cost of the Royal Indian Marine and the annual contribution of about £100,000 towards the expenses of His Majesty's ships employed in the Indian seas.

On the 31st March 1916 the Royal Indian Marine consisted of three troopships and six other sea-going vessels, three inland vessels, three flats, and a number of small steamers, launches, &c. There was an establishment of about 2,130 officers and men.

Expenditure on the Military Services.

	Accounts, 1914-15.	Accounts, 1915-16.	1916-17.		1917-18, Budget.
			Budget.	Revised.	
EXPENDITURE.	Rs.	Rs.	Rs.	Rs.	Rs.
INDIA—					
Effective Services—					
Administration ..	64,64,083	50,70,067	52,04,430	54,07,000	60,70,810
Military Accounts ..	28,28,910	25,20,017	25,29,300	26,00,000	26,03,440
Regimental Pay, etc.	10,88,36,245	7,99,57,421	7,68,01,520	7,72,20,000	7,70,22,420
Supply and Transport	3,12,17,805	2,47,25,419	2,70,10,580	2,83,66,000	3,20,03,000
Veterinary	3,75,784	1,74,025	1,74,860	1,72,000	1,73,610
Clothing	20,59,547	24,53,604	17,32,620	41,42,000	26,14,360
Remounts	52,12,080	45,99,756	40,60,270	44,15,000	45,77,480
Medical Services ..	53,53,407	28,06,736	27,60,180	29,46,000	32,64,970
Medical Stores ..	3,34,215	4,92,279	5,54,020	6,76,000	6,82,990
Ordnance	1,01,46,288	89,30,346	1,12,83,390	1,26,48,000	1,37,86,510
Ecclesiastical ..	408,819	3,75,208	3,85,130	3,68,000	3,78,190
Education	10,04,196	5,66,320	7,08,660	5,58,000	6,01,990
Compensation for Food, etc.	52,56,955	35,84,000	32,34,000	34,01,000	12,37,000
Miscellaneous Services	3,48,63,084	10,11,32,874	11,13,51,810	11,46,46,000	12,66,40,000
Hutting	1,86,651	2,61,600	2,00,000	2,64,000	2,00,000
Conveyance by Road, River and Sea.	7,98,532	5,91,653	6,70,540	7,90,000	7,05,040
Conveyance by Rail..	48,67,594	58,83,294	46,03,780	1,05,00,000	1,04,99,570
Cantonments ..	14,47,274	14,06,228	13,88,910	15,93,000	19,35,620
Unadjusted Expenditure.	39,308	—12,49,349	....	....	....
TOTAL Rs. ..	22,17,00,777	24,42,81,498	25,46,54,000	27,07,12,000	28,49,97,000
Non-effective Services—Rs.	1,10,06,881	1,17,29,048	1,37,93,000	1,28,46,000	1,64,80,000
TOTAL INDIA Rs. ..	23,27,07,658	25,60,10,546	26,84,47,000	28,35,58,000	30,14,77,000
Equivalent in sterling £ ..	15,513,844	17,067,369	17,896,500	18,903,900	20,098,500

	Accounts, 1914-15.	Accounts, 1915-16.	1916-17. Budget.	1916-17. Revised.	1917-18, Budget.
ENGLAND—	£	£	£	£	£
Effective Services—					
Payments to War Office for British Forces.	930,620	929,251	930,700	930,700	930,700
Furlough Allowances, etc., of British Forces.	78,603	15,182	9,000	23,000	23,000
Consolidated Clothing Allowances of British Soldiers.	24,700	6,848	....	....	....
Furlough Allowances, Indian Service.	265,259	143,393	148,000	187,000	187,000
Indian Troop Service	85,206	556,904	282,300	279,600	282,300
Other Heads	142,741	51,074	38,500	55,000	54,500
Clothing Stores ..	90,438	111,797	99,900	127,500	105,900
Ordnance and Miscellaneous Stores.	479,481	319,175	151,000	1,195,900	835,000
Medical Stores ..	94,501	104,511	123,700	189,500	141,800
Supply and Transport Stores.	61,901	88,444	57,500	83,000	96,000
Mechanical Transport Stores.	....	....	....	110,000	158,800
Military Farms Stores	11,470	12,943	17,400	27,800	16,400
Operations in Persian Gulf (Stores).	18,572	....	....	....	....
Aviation Stores ..	....	60,000	....	....	169,000
Stores taken to India with Troops.	17,254	8,315	600	2,100	....
TOTAL £	2,300,746	2,407,837	1,858,600	3,211,100	3,000,400
Non-effective Service—					
Payments to War Office for British Forces.	946,073	864,473	766,000	676,000	600,000
Pensions, Indian Service.	1,374,339	1,301,993	1,295,000	1,250,000	1,230,000
Other Heads	201,557	251,528	263,000	276,000	287,000
TOTAL £ ..	2,521,969	2,417,994	2,324,000	2,202,000	2,117,000
TOTAL ENGLAND £ ..	4,822,715	4,825,831	4,182,600	5,413,100	5,117,400
TOTAL EXPENDITURE £ ..	20,336,559	21,893,200	22,079,100	24,317,000	25,215,900
RECEIPTS.	Rs.	Rs.	Rs.	Rs.	Rs.
India .. .. Rs.	1,12,24,641	90,00,890	88,30,000	1,03,20,000	1,02,35,000
	£	£	£	£	£
Equivalent in sterling £	748,309	600,059	588,700	688,000	682,300
England .. £	347,882	339,884	314,700	331,900	304,000
TOTAL RECEIPTS £ ..	1,096,191	939,943	903,400	1,019,900	986,300
TOTAL NET EXPENDITURE £	19,240,368	20,953,257	21,175,700	23,297,100	24,229,600

ESTABLISHED STRENGTH of BRITISH and INDIAN ARMIES in BRITISH INDIA (exclusive of Indian Artificers and Followers).

CORPS.	Northern Army.			Southern Army.			Total.		
	Commissioned Officers.	Warrant & Non-Commissioned Officers & Privates.	Total.	Commissioned Officers.	Warrant & Non-Commissioned Officers & Privates.	Total.	Commissioned Officers.	Warrant & Non-Commissioned Officers & Privates.	Total.
BRITISH ARMY.									
Royal Artillery ..	292	7,681	7,973	287	7,509	7,796	579	15,190	15,769
Cavalry	162	3,594	3,756	81	1,797	1,878	243	5,391	5,634
Royal Engineers .	204	9	213	105	6	111	309	15	324
Infantry ..	784	28,164	28,948	672	24,126	24,798	1,456	52,290	53,746
Invalid & Veteran Establishment.	..	..	..	..	..	..	..	..	..
Indian Army ..	71	..	71	30	..	30	101	..	101
General List, Infantry ..	..	..	..	..	..	..	..	..	..
General Officers unemployed ..	1	..	1	..	..	..	1	..	1
Total, British Army	1,514	39,448	40,962	1,175	33,438	34,613	2,689	72,886	75,575

CORPS.	British.		Indian.		British.		Indian.		British.		Indian.	
	Officers.	Warrant and N.-C. O.	Officers.	N.-C. O. and Men.	Officers.	Warrant and N.-C. O.	Officers	N.-C. O. and Men.	Officers.	Warrant and N.-C. O.	Officers.	N.-C. O. and Men.
INDIAN ARMY.												
Artillery ..	57	..	6,440		11	..	3,603		68	..	10,043	
Body-Guards ..	4	..	280		4	..	142		8	..	422	
Cavalry	372	..	15,440		211	..	8,810		583	..	24,250	
Sappers & Miners	34	129	1,971		53	212	3,183		87	341	5,154	
Infantry ..	1,095	..	65,688		930	..	54,304		2,025	..	119,992	
Total, Indian Army	1,562	129	89,819		1,209	212	70,042		2,771	341	159,861	
Imperial Service Troops ..	..	..	9,077		..	..	11,992		..	..	21,069	
Indian Reservists — Artillery ..	..	..	1,363		..	..	565		..	..	1,928	
Indian Reservists — Cavalry ..	..	..	1,314		..	..	489		..	..	1,803	
Indian Reservists — Sappers & Miners..	..	..	686		..	..	491		..	..	1,177	
Indian Reservists — Infantry...	..	..	19,380		..	..	11,836		..	..	31,216	
Volunteers— Efficients ..	818	17,709	..		731	20,122	..		1,549	37,021	..	
Reservists ..	19	1,521	..		12	1,533	..		31	3,054	..	

* Latest figures obtainable.

THE EAST INDIES SQUADRON.

Since 1903 a squadron of the Royal Navy, known as the East Indies Squadron, has been maintained in Indian waters. It has naturally varied in strength from time to time, and of late years in particular there have been several changes in its composition, the most recent being in the direction of strengthening it, owing to the disappearance of strength in the other squadrons of the Eastern Fleet. In 1903 the squadron consisted of one second class and three smaller cruisers and four sloops or gunboats. In 1906, when the policy of withdrawal from Eastern waters was inaugurated, it consisted of two second class and two third class cruisers, and remained at this strength until 1910: when one second class cruiser was withdrawn and two smaller vessels substituted, and three cruisers were lent from the Mediterranean to assist in the suppression of the arms traffic in the Gulf. By 1913 the position of the East Indies squadron had considerably improved. The battleship Swiftsure had taken the place of the second class cruiser which had been flagship, and a modern second class cruiser replaced the Perseus. This is apparently part of the scheme for constituting a Pacific Fleet of three "units," one unit being the Australian fleet which is ultimately to consist of 8 battle cruisers, 10 protected cruisers, 18 destroyers and 12 submarines, but up to the present it has completed, or nearly so, one battle cruiser, three others, six destroyers and three submarines. The other two "units" will be the squadrons stationed in China and Indian waters respectively.

The East Indies Squadron at the beginning of the war consisted of the following ships (later details are not published in the Navy List):—

Flagship: Swiftsure, battleship, 11,800 tons.

Commander-in-Chief, Rear-Admiral Wemyss.

Dartmouth, cruiser, 5,250 tons: Captain Judge D'Arcy.

Fox, cruiser, 4,050 tons: Captain F. W. Caulfield.

Alert, sloop, 960 tons. Lieut. A. Johnstone.

Espiegle, sloop, 1,070 tons. Commander W. Nunn.

Odin, sloop, 1,070 tons: Commander C. R. Wason.

Contributions to the Navy.

A cock and bull story, to the effect that the Native Chiefs of India were going to present three super-Dreadnoughts and nine first class cruisers to the Imperial Navy, was started in November 1912, and directed public attention to the question whether India was paying an adequate amount for the services rendered by the Navy. Even the Naval Annual (1913 edition) took part in the agitation for an increased contribution by India. It says:—"Rumour has been persistent regarding the attitude of India towards the Navy. Some exaggerated statements were published during the year, but nothing definite has been done. This is the more surprising when it is remembered that, although the seaborne commerce of India totals 115 millions sterling, the annual contribution to the Navy is only £100,000 out of a total revenue of 82 millions sterling. It is true that very heavy expenditure is involved in the military forces of India, but the commerce, coast protection, and transporting of troops is dependent upon Britain's sea power. There is a prospect that India will voluntarily follow the example of the self-governing Dominions."

The proportion of contributions from the overseas Dominions towards naval expenditure is shown in the following table issued with the last Navy Estimates that gave details:—

Received from	Nature of Service.	Total.
		£
India ..	Maintenance of His Majesty's Ships in Indian Waters ..	100,000
	Indian Troop Service (on account of work performed by the Admiralty)	3,400
	Repayment on account of services rendered by His Majesty's Ships engaged in the suppression of the Arms Traffic in the Persian Gulf	64,000
Australian Commonwealth Dominion of Canada.	Contributions on account of liability for Retired Pay of Officers and Pensions of Men lent from the Royal Navy.	10,800
Australian Commonwealth.	Survey of the N. W. Coast of Australia	7,500
Do	Maintenance of an Australasian Squadron and of a branch of the Royal Navy Reserve	41,600
Dominion of New Zealand	Maintenance of an Australasian Squadron and of the Imperial Navy generally, also of a branch of the Royal Naval Reserve	100,000
Union of South Africa ..	General maintenance of the Navy	85,000
Newfoundland ..	Maintenance of a branch of the Royal Naval Reserve ..	3,000
	Total ..	416,300

India's Marine Expenditure.

That table, however, only shows a part of the expenditure made by India on the Marine. Since 1869 India has paid a contribution of varying amounts to the Imperial Government in consideration of services performed by the Royal Navy. Under existing arrangements, which date from 1896-7, the subsidy of £100,000 a year, already referred to, is paid for the upkeep of certain ships of the East India Squadron, which may not be employed beyond prescribed limits, except with the consent of the Government of India. The chief heads of marine expenditure, which amounts to nearly £400,000 annually, are shown below. Charges and receipts in respect of pilotage are no longer brought to account under this head :—

	Accounts, 1914-15	Accounts, 1915-16.	1916-17. Revised.	1917-18. Budget.
EXPENDITURE.				
India .. .. Rs.	36,89,687	72,07,696	48,66,000	46,95,000
Equivalent in sterling .. £	245,979	480,513	324,400	313,000
England .. .. £	217,391	265,000	420,000	525,500
Total .. £	463,370	745,513	744,000	838,500
RECEIPTS.				
India .. .. Rs.	29,71,715	33,48,942	55,98,000	39,12,000
Equivalent in sterling .. £	198,115	223,263	373,200	260,800
England .. .. £	....	....	....	....
Total .. £	198,115	223,263	373,200	260,800
NET EXPENDITURE . £	265,255	522,250	371,400	577,700

ROYAL INDIAN MARINE.

The Royal Indian Marine (The Sea Service under the Government of India) traces its origin so far back as 1612 when the East India Company stationed at Surat found that it was necessary to provide themselves with armed vessels to protect their commerce and settlements from the Dutch or Portuguese and from the pirates which infested the Indian coasts. The first two ships, the Dragon and Hoseander (or Osiander), were despatched from England in 1612 under a Captain Best, and since those days under slightly varying titles and of various strengths the Government in India have always maintained a sea service.

The periods and titles have been as follows:—

Hon. E. I. Co.'s Marine	..	1612—1686
Bombay „	..	1686—1830
Indian Navy „	..	1830—1863
Bombay Marine	.. ..	1863—1877
H. M. Indian Marine	.. ..	1877—1892
Royal Indian Marine	..	1892. Present day.

The Marine has always been most closely connected with Bombay, and in 1668 when the E. India Co. took over Bombay, Captain Young of the Marine was appointed Deputy Governor. From then until 1877 the Marine was under the Government of Bombay, and although from that date all the Marine Establishments were amalgamated into an Imperial Marine under the Government of India, Bombay has continued to be the headquarters and the official residence of the Director.

War Service of the Marine.

1612–1717. Continuous wars against Dutch, Portuguese and Pirates for supremacy of West Coast of India. 1744 War with France, capture of Chandernagore, and French ship Indienne. In 1756 Capture of Castle of Gheria, 1774 Mahratta War, capture of Tannah. Latter part of the eighteenth century, war with French and Dutch, Capture of Pondicherry, Trincomalee, Jafnapatam, Colombo, etc. 1801 Egyptian campaign under Sir Ralph Abercrombie. 1803 War with France. 1810 Taking of Mauritius and capture of French ship in Port Louis. Early part of the nineteenth century suppression of Jowasmi Pirates in the Persian Gulf. 1811 Conquest of

Tara. 1813 Expedition against Sultan of Sambar. 1817-18 Mahratta War, capture of Forts at Severndroog. 1819 Expedition to exterminate piracy in the Persian Gulf. 1820 Capture of Mocha. 1821 Expedition against the Beni-koo-Ali Arabs. 1824-26 First Burma War. 1827 Blockade of Berbera and Somali Coast. 1835 Defeat of Beni Yas Pirater. 1838 Expedition to Afghanistan and capture of Karachi. 1838 Capture of Aden. 1840–42 War in China. 1843 Scinde War Battle of Meanee, capture of Hyderabad. 1845–46 Maori war in New Zealand. 1848–49 War in Punjab, siege of Mooltan. 1852 Second Burma War, Capture of Rangoon, Martaban, Basseln, Prome and Pegu. 1855 Persian War, capture of Bushire, Muhammerah and Ahwaz. 1856–57 War in China. 1857–59 The Indian Mutiny. 1859 Capture of the Island of Beyt. 1860 China War, Canton, Taku Forts, Fatshan and Pekin. 1871 Abyssinian War. 1882 Egyptian Campaign. 1885 Egyptian Campaign. 1885 Third Burma War. 1889 Chin-Lshai Expedition. 1896 Suakin Expedition. 1897 Expedition to Imtirbe, Mombassa E. Africa. 1899–1902 S. African War. 1900–01 Boxer Rebellion in China, relief of Pekin. 1902–04 Somaliland Expedition.

Personnel, 1917.

DIRECTOR.

Captain Walter Lumsden, C.V.O., C.I.E. R.N., A.-D.-C., Office Residence, Government Dock yard, Bombay (*on leave*).

(The Director, R.I.M., advises the Government of India on all maritime matters.)

DEPUTY DIRECTOR.

Captain N. F. J. Wilson, C.M.G., R.I.M., Off. Residence, Government Dockyard, Bombay.

OFFG. DIRECTOR, R.I.M.

Capt. B. H. Jones, R.I.M., Offg. Dy. Director.

CAPTAIN SUPERINTENDENT.

Captain E. J. C. Hordern, R.I.M., Off. Residence, Marine-House, Calcutta.

OFFICERS.

Commanders	33
Lieutenants and Sub-Lieutenants	72
Chief Engineers	10
Engineers and Assistant Engineers	75
Marine Survey	11

WARRANT OFFICERS.

Gunners	24
Clerks	20
Engine Drivers	20

PETTY OFFICERS AND MEN.

2,225 Recruited from the Ratnagiri District of the Bombay Presidency.

SHIPS.

Troopships	R. I. M. S.	Dufferin*	6315 tons	10,191 Horse Power.	
"	"	Hardinge*	5467 "	9,366 "	
"	"	Northbrook.*	5048 "	7,249 "	
Light-house Tender	"	Nearchus	491 "	753 "	Persian G.
Station Ship	"	Dalhousie*	1524 "	2,200 "	
"	"	Mayo	1125 "	2,157 "	Rangoon.
Despatch Vessel	"	Lawrence*	903 "	1,277 "	
Special Service	"	Minto*	960 "	2,025 "	
Surveying Ship	"	Investigator	1014 "	1,500 "	
"	"	Palinurus	299 "	486 "	
Station Ship	"	Sunbeam	334 "	70 "	Port Blair.
River Steamer	"	Bhamo	172 "	250 "	Burma.
"	"	Sladen	270 "	360 "	"

* On Special Service.

In addition to the above are 39 launches composed of special service launches, target towing tugs, powder boats, military service launches, etc.

Dockyards.

There are two Royal Indian Marine Dockyards at Bombay and at Calcutta, the former being the more important. There are 5 graving docks and a wet basin at Bombay, together with factories which enables the whole of the repairs for the ships of the East India Squadron of the Royal Navy and for the ships of the Royal Indian Marine and local Governments to be carried out, and tugs, lightships, pilot schooners, launches, etc., constructed.

PRINCIPAL OFFICERS, BOMBAY DOCK YARD.

R. I. M. Officers.

Superintendent, Comdr. C. W. Ramsay, R.I.M.
Inspector of Machinery, Engr.: Capt. T. H. Knight, C.I.E. R.I.M.

CIVILIAN OFFICERS.

Chief Constructor, Mr. T. Avery, C.I.E.
Constructor, Mr. D. H. North.

PRINCIPAL OFFICERS, CALCUTTA DOCKYARD.

R. I. M. Officers.

Staff Officer, Commander R. G. Strong, R.I.M.
Inspector of Machinery, Engr.: Capt. J. Lush, R.I.M.

CIVIL OFFICERS.

Constructor, Mr. E. P. Newnham.

Appointments.

In addition to the regular appointments in the ships of the Royal Indian Marine, and in the R. I. M. Dockyards, the following appointments under local Governments are held by officers in the Royal Indian Marine :—

BOMBAY.

Port Officer, Assistant Port Officer, 1st Engineer and Ship Wright Surveyor and 2nd and 3rd Engineers and shipwright surveyors to the Government of Bombay.

CALCUTTA.

Port Officer, Deputy Port Officer and Assistant Port Officer, 2nd and 3rd Engineers and shipwright surveyors to the Government of Bengal.

BURMA.

Principal Port Officer, Burma, First Assistant Port Officer, Rangoon. Engineer and shipwright surveyor to Government of Burma.
Assistant. Do. do. do. do.
Port Officer. Akyab, Moulmein and Bassein.
Marine Transport Officer, Mandalay, and Superintending Engineer, Mandalay.

MADRAS.

Presidency Port Officer and Deputy Conservator of the Port.

CHITTAGONG.

Port Officer, and Engineer and Shipwright Surveyor.

ADEN.—Port Officer.

KARACHI.—Port Officer.

PORT BLAIR.—Engineer and Harbour Master.

Expenditure.

Recent expenditure on the Royal Indian Marine under all heads has been :—

1913-14	£ 512,845
1914-15	£ 463,370
1915-16	£ 745,513
1916-17	£ 744.600
1917-18 (Estimate)	£ 838,500

Against this were receipts, from Dockyards, for outside work done, and from sales of vessels, stores, etc., which amounted in 1913-14 to £ 89,542 and in 1914-15 to £ 89,200 so that the actual cost to the State for the whole service was :—

1913-14	£ 423,303
1914-15	£ 265,255
1915-16	£ 522.250
1916-17	£ 371,400
1917-18 (Estimate)	£ 577,700

THE NICHOLSON COMMITTEE.

The Earl of Crewe (Secretary of State for India) announced in the House of Lords on November 2, 1911, that the Government of India was conducting an inquiry into the various departments, with the view of seeing what economies might be effected, and in that operation the Department of the Army was properly included, but there would be no sacrifice of the safety of India or any risk in maintaining order. They had been asked by the Government that they should be assisted in making an inquiry into the whole military position by a Committee over which Field-Marshal Sir W. Nicholson would preside.

The Committee met in Simla in May 1912, consisting of :—F. M. Sir W. (afterwards Lord) Nicholson ; Lt. General Sir Percy Lake, Chief of the General Staff in India; Lt.-Gen. Sir Robert Scallon, Indian Army ; and Sir William Meyer, Chief Secretary to the Government of Madras (now Finance Member of Council). The Committee were instructed by their terms of reference :—First, to carry out a comprehensive survey of the various circumstances requiring the use of Military Force which may arise out of the external or internal situation in India under the conditions which now exist or may probably arise during the next few years. Secondly, to consider and report on the numbers and constitution of the armed force which should be maintained in India to meet these obligations. Thirdly, to consider and report whether any, and if so, what measures for the reduction of Military expenditure are compatible with the efficient maintenance of that force. Its deliberations, which were private, continued until Lord Nicholson left India in April, 1913, and it was announced in the House of Commons that the Committee's report would not be published. According to the Military correspondent of *The Times* (June 2, 1913) it has "been known for some time past that a division of opinion has taken place within the Committee. Lord Nicholson and Sir William Meyer have signed what must be called by courtesy a majority report, because the distinguished Field-Marshal was given the invidious advantage of a casting vote. But Sir Percy Lake and Sir Robert Scallon are credited with having taken strong exception to many of the proposals made by their colleagues, and will doubtless draft a minority report." During a discussion in the Imperial Legislative Council on January 14th, 1914, it was officially stated that the report would not be published. Any action on the conclusions of the Committee is necessarily held in abeyance during the War.

Finance.

The study of the course of Indian finance during the war is of absorbing interest, for not one single anticipation made by all who had examined the situation has been realised. The broad principles governing Indian finance can be briefly indicated. India is still in the main an agricultural country and seventy per cent. of its population is dependent on agriculture. Despite the rapid spread of irrigation, this agriculture is largely contingent on the seasonal rains, which are liable to great fluctuations. The Indian revenues are therefore somewhat inelastic and are very largely governed by the character of the season. The next point is the currency system. India has large commitments in London, and a sum averaging about twenty millions sterling a year has to be remitted to London in payment of Government stores, interest on debt, and the pay and pensions of the civil servants who are on leave or on pension. The currency of India is rupee and rupee notes, with before the war a considerable circulation of sovereigns. To maintain the gold exchange value of this currency in time of pressure, there has been built up a large gold reserve, held for the most part in London, in bullion and in sterling securities.

It has always been anticipated that in time of war the greatest anxiety of the Government of India would be to maintain the sterling value of the rupee, because of the demand for remittance to London. During the first month of the war, these expectations were realised; there was an urgent demand for sterling remittance, which was not satisfied until £ 8¾ millions of gold bills, or Reverse Councils, had been sold. The position thus set up was complicated by two other factors, both of which had been to a certain extent foreseen. There was a serious rush on the Post Office Savings Banks, and sum of £ 7 millions sterling was withdrawn. Government maintains no reserve against this unfunded debt, and the banking facilities in the country look to Government help for support in emergencies, instead of being ready to give Government help. This demand was met by borrowing from the Gold Standard Reserve, a portion of which was automatically transferred from London to India by the sale of the Reverse Councils. There was also a marked tendency to convert the rupee notes into cash; and this was wisely met by increasing the facilities or encashment, instead of attempting to curtail them. The demand was not however styed until Rs. 7 crores, or £ 4¾ millions had been presented for payment. Thereafter the whole tendency of the currency system was changed. The harvests were on the whole good; there was a large demand for the Indian staples at high prices; at the same time there was a reduction of the import trade, through the decline in productivity in England, the high prices of all manufactured goods, and the scarcity of freight. These forces created a position when the demand was not for sterling, but for rupee remittance they were intensified by very large payments in India on behalf of the Home Government. Rupees were poured into the agricultural districts in an unending stream, and only a fraction of these was returned to the Government Treasuries and the coffers of the banks. There was an immense demand for remittance to India, to pay for the produce required by the Allies and Neutral States; and this imposed a tremendous tax on the available reserves. It was the hope of the Government freely to meet this demand by selling Council Bills on India up to the full requirements of the market. In November 1916, however it became evident that the treasuries and the banks could not meet this drain, and a notification had to be published reducing the sales of Bills to Rs. 80 lakhs a week subsequently lowered to Rs. 60 lakhs. In July 1917, in order to conserve the available supplies of gold and silver bullion, Government took entire control of all imports. Since November 1917 India has suffered from a severe scarcity of remittance, both in the form of Bills and bullion. This imposed a severe handicap on trade, although the handicap was more apparent than real, because if the remittance had been available the freight was not. These forces will be found reflected in greater detail in the section which deals with the Paper Currency; they are noted here because they mark such a complete reversal of all expectations—a demand for rupees and for rupee remittance, instead of the demand for gold remittance, which had been universally expected. Before proceeding in the light of these general consideration to consider in detail the financial history of India during the war, it is necessary to examine in a little more detail the financial peculiarities of the system in vogue.

Financial Characteristics.—Three important facts have to be borne in mind in considering the finances of India. The first is that the Budget of the Government of India includes also the transactions of the Local Governments, and that the revenues enjoyed by the latter are mainly derived from sources which they share with the Central Government. The principles underlying the relations of the supreme with the local governments are explained in the chapter dealing with this question. Generally speaking, certain heads of revenue are divided equally between the provinces and the Imperial Government, and certain heads are enjoyed entirely by the local governments. These vary with different provinces, but broadly it may be said that the divided heads are land revenue, excise, stamps, income-tax and the in-comings from the large irrigation works. The Provincial Governments take the whole of the receipts under forests and registration, and the income of the spending departments which they manage, such as ordinary public works, police, education, medical, courts and jails. The Government of India take the whole of the revenue accruing from the export of opium, salt, customs, mint, railways, posts and telegraphs, military receipts and tribute from Native States. As regards the expenditure, the Government of India are mainly responsible for the outlay relating to defence, railways, posts and telegraphs, interest on debt and home charges; and the provinces for charges connected with land revenue and general administration, forests, police, courts and jails, education and medical, whilst charges for irrigation and ordinary public works are common to both Im-

perial and Provincial. The second point is that a very large proportion of the revenue of the Government of India is derived not from taxation but from great State enterprises. It may be taken roughly that nearly two-thirds of the gross revenue is derived from sources other than taxation, such as the land revenue, opium, forests, tribute from Native States, posts and telegraphs, railways and irrigation. The third point is that the Secretary of State for India enters into very large financial transactions on behalf of the Indian Government in order to meet what are generically known as the Home Charges. These amount now to some eighteen millions sterling and are met by the Secretary of State selling for gold drafts in rupees on the Indian Treasuries known as the Council Bills or telegraphic transfers. These Home Charges were for many years erroneously described as a "drain" on India. A large proportion however goes to defray the interest on the sterling debt and the outlay on the purchase of stores and railway materials which cannot be acquired in India. The only part of the Home Charges which by any stretch of the imagination can be termed a "drain" is that which stands for civil and military officers on leave or pension, and here it is now recognised that India receives exceedingly good value for services rendered. One supplementary point which needs consideration is that the finances of India were artificially inflated for several years by the unusual opium receipts. The Government of India used to sell opium for export to China or the right of exporting opium to China and in view of the approaching end of this trade inflated prices were given for opium for export. This led to large windfall surpluses which for several years made the Government finances appear more prosperous than they really are.

Twelve Years' Finance.

We may now turn to the financial results of the last twelve years in pounds sterling.

—	Revenue.	Expenditure.	Surplus.
	£	£	£
1906-7 ..	73,100,000	71,500,000	1,600,000
1907-8 ..	71,900,000	70,700,000	300,000
1908-9 ..	69,800,000	73,500,000	*3,700,000
1909-10 ..	74,600,000	74,000,000	600,000
1910-11 ..	80,300,000	76,900,000	3,400,000
1911-12 ..	82,835,750	78,895,416	3,940,334
1912-13 ..	86,985,300	83,623,400	3,361,900
1913-14 ..	84,262,000	83,675,000	587,000
1914-15 ..	80,156,000	85,115,000	*4,959,000
1915-16 ..	82,620,000	85,204,000	*2,644,000
1916-17 ..	96,834,900	91,017,000	5,817,500
1917-18 ..	98,850,900	98,721,100	129,800

* Deficit.

Provincial and Imperial—At this stage one point should be made clear. Study of the figures often reveals a baffling discrepancy between "Imperial" and "Imperial"-cum-Provincial balances. This arises from the intermingling of Provincial with Imperial finance. During the halcyon years when large surpluses accrued to the treasury from the opium surpluses and the general prosperity of the country, the Government did not reduce taxation, but devoted these surpluses in part to the extinction of floating debt and the avoidance of further debt by financing public works from revenue and in part to large grants to the Local Governments for ameliorative works, chiefly in improving education and sanitation. But the spending of this money involved long preparation, with the result that the Local Government accumulated very large balances in excess of the normal. Further, owing to the establishment of a regime of strict official economy, the Provinces have expanded their balances out of current revenues.

First War Budget.—These factors reflected in the Budget of 1914-15—the Indian financial year closes on March 31st—produced a deficit of £4,959,000. The most rigid economy failed to balance the Budget estimates for 1915-16 by £3,833,000. The Government had therefore to decide whether they would meet the actual and prospective deficits by borrowing or by the imposition of fresh taxation. They speculated on the assumption that the war would be over before the close of the year, and decided to meet the deficits by temporary and permanent borrowing. For this they had justification. In the past, it has been the practice of the Government of India to use their surpluses largely for the avoidance of debt for the construction of reproductive works, and at the same time to meet any deficit not by temporary borrowing, but by additional taxation; it was therefore only an act of justice to meet what was expected to be a temporary war deficit by borrowing. Government therefore proposed to continue the loan of £7 millions from the Gold Standard Reserve, to renew the £7 millions of floating debt in London, to borrow £3 millions in India and £6½ millions in London. In these ways they expected to maintain a fair scale of expenditure and a reasonable outlay on reproductive works without recourse to fresh taxation.

Second War Budget.—The Budget of 1915-16 having been based on the assumption that the war would be over before the close of the financial year, it was obvious that fresh taxation would be necessary to meet the conditions arising out of the prolongation of hostilities. Moreover there were certain adverse circumstances in the year. The monsoon rains were not good. The Customs revenue showed a certain decline. The railway receipts were good; this has now become an important head in the Indian Budget, whereas in past years the railways did not pay interest charges; the larger revenue arose in part from a brisk internal trade and in part from the substitution of rail-borne for sea-borne coal from Bengal to the chief consuming centres. The borrowing programme was interrupted. In the Budget, the Secretary of State calculated on borrowing £6½ millions; in practice he raised only £3·1 millions. Rigid economy was exercised in the

capital programme; for instance the railway budget was reduced from £8 million to £4·9 millions, and the expenditure on irrigation was cut down from £1·1 million to £·9 million. The military expenditure was also much heavier than was anticipated. Whilst therefore the budgetted revenue rose from £ 80·4 millions to £82·62 millions and the expenditure from £84·435 millions to £85·264 millions, the **deficit was £2·644 millions**. On a cautious estimate of revenue and expenditure with the existing scale of taxation the close of the financial year 1916-17—March 31st, 1917—would have found the State with a further deficit of £2·96 millions. Reference has been made to the fact that in India in time of crisis the State is a lender rather than a borrower; also to the fact that there was a large temporary debt—£7 millions in London and a like sum in India. It was therefore of the first importance to impose new taxation and to discharge as much temporary debt as possible.

The New Taxes.—The new taxes took the general form of an addition to the tariff. It is explained in the section on Customs (*q. v.*) that the Indian tariff is one for revenue purposes, that it is based on a general import duty of five per cent. with a special tariff of three and a half per cent. on cotton piece-goods and a large free list. The Budget raised the general tariff to seven and a half per cent., except in the case of sugar, which was raised to ten per cent. The free list was also reduced and special tariffs arranged for wines and spirits and tobacco. To this general rule, however, one important exception was made: the import duty on piece-goods stood at the old figure of three and a half per cent. These additions were estimated to produce £410,000. Export duties were also imposed on two flourishing staples, tea to the extent of Rs. 1-8-0 per 100 lbs., raw jute Rs. 2-4-0 per bale of 400 lbs., equivalent to five per cent., and in the case of manufactured jute Rs. 10 per ton on sacking and Rs. 16 per ton on Hessians. The whole yield from the revision of the tariff was put at £2·1 millions. The salt tax had been steadily reduced from Rs 2-8-0 per maund of 82 lbs. to Re. 1; as this has always been reckoned a war tax, an addition of four annas a maund to the duty was made, estimated to yield £500,000. The income-tax was also revised and further graduated. Under the old schedule incomes of Rs. 1,000 and under were exempt. Incomes above that figure paid either four or five pies in the rupee; roughly speaking the income-tax may be taken as five pies in the rupee or six pence in the pound. The new proposals left all incomes of Rs. 5,000 and under untouched. Incomes of Rs. 5,000 to Rs. 9,999 were charged six pies or seven pence halfpenny in the pound; incomes of Rs. 10,000 to Rs. 24,999, nine pies in the rupee or elevenpence farthing in the pound; and incomes of Rs. 25,000 and upwards one anna in the rupee or one and three pence in the pound. Profits on companies were charged the anna rate.

Financial Effect.—To sum up the financial effect of the proposals above explained, Government aimed at an additional revenue of—

(*a*) £2,150,000 from Customs and consequential changes in the excise duties on liquors.

(*b*) £600,000 by an enhancement of the duty on Salt.

(*c*) £900,000 by an increase under Income Tax.

Or in all a little over £3·6 millions as against an estimated imperial deficit of £2·6 millions. This left an Imperial surplus of £1,052,000 which, though somewhat less than aimed at in the years just preceding the war, supplied a useful and much needed source of strength against contingencies.

Third War Budget.—The second war budget anticipated a revenue of £ 86·5 millions—an expenditure of £ 86 millions, leaving a surplus of £·473 million; the revenue actually received was £ 96·7 millions, the expenditure was £89·4 millions, leaving a surplus of £ 7·2 millions. The agricultural year was an exceptionally good one; despite the inevitable restrictions on trade, there was a considerable recovery; and these conditions were reflected in the revenue. Nearly half the expansion was due to a phenomenal increase of over £4 millions from railways. The more favourable trade and economic conditions, coupled with the removal of competition from the coastwise traffic, caused the railway receipts to attain an unprecedented figure. The new taxes imposed in the Budget were estimated to yield £3·6 millions; the actual yield was £ 1,200,000, more of which £200,000, occured under salt, £650,000, under customs, and £350,000, under income tax. The greater part of the increased expenditure was under military charges. On capital account it was estimated that there would be an expenditure of £ 6·6 millions, including £ 2 millions for the discharge of debt; the capital expenditure was £ 15·8 millions, mainly due to increasing the discharge of debt from £ 2 millions to £ 11·6 millions. The Budget for 1917–18 provided for a revenue of £ 98·8 millions, an expenditure of £ 98·819 millions, leaving a surplus of £ ·032 million. To appreciate these figures we must turn to what was the dominating feature of the Third War Budget namely India's contribution to the War.

India's contribution to the war—The Finance Member explained that the Government of India had been taken to task for not contributing more liberally to the cost of the war. Section 22 of the Government of India Act forbids the application of the revenues of India, to defraying the expenses of any military operations carried on beyond her external frontiers, otherwise than for repelling or preventing actual invasion, without the specific approval of both Houses of Parliament. By special resolution of Parliament India had paid the ordinary charges of the troops employed out of India, and up to the end of the year India has contributed in this manner a sum of £ 11½ millions, to which would be added in the ordinary course of the year 1917–18 a sum of £ 4 millions. But the Government of India had always felt that if their circumstances warranted it they should take up the question of making a further direct contribution towards the struggle and at the beginning of January the Viceroy addressed the Secretary of State a telegram offering to accept an ultimate total special contribution of £ 100 millions to the war. This would involve an annual payment of £ 6 millions in interest and sinking fund charges. On the existing basis of taxation the Budget was estimated to produce a surplus of

£ 2¾ millions; but it was necessary to provide £ 3 millions for interest and sinking fund charges, so another £ 3 millions would have to be raised by taxation.

The new Taxes.—The natural manner of raising the bulk of this additional sum was the imposition of an excess profits tax; but this was put aside, both because of the absence of the necessary administrative machinery, and because the charge was a permanent one, which would continue after the excess profits due to the war had ceased to operate. It was therefore proposed to establish a super-tax. The rate of income tax established in the Budget of 1916-17 ran on a graduated scale of four pies in the rupee to one anna, which last sum was made payable on incomes of Rs. 25,000, and over. The ordinary rate of income tax was maintained. In explaining his proposals in detail the Finance Member said:—

"The super-tax will begin in respect of income exceeding Rs. 50,000 and will then be levied in an ascending scale as shown below:—

For every rupee of the first Rs. 50,000 of the excess, *i.e.*, between Rs. 50,000 and 1 lakh. 1 anna per rupee.

For every rupee of the next Rs. 50,000 of the excess, *i.e.*, between Rs. 1 and 1½ lakhs. 1½ annas per rupee.

For every rupee of the next Rs. 50,000 of the excess, *i.e.*, between Rs. 1½ and 2 lakhs. 2 annas per rupee.

For every rupee of the next Rs. 50,000 of the excess, *i.e.*, between Rs. 2 and 2½ lakhs. 2½ annas per rupee.

For every rupee of remainder of the excess, *i.e.*, on everythi over Rs. 2½ lakhs. 3 annas per rupee.

"These rates will be in addition to the one anna income tax, so that a person possessing an income exceeding Rs. 2½ lakhs will pay in all a rate of 4 annas per rupee (equivalent to 5*s* in the pound) on that excess; while as regards each half lakh making up the first Rs. 2½ lakhs he will pay rates varying from 1 anna (*i.e.*, ordinary income tax alone) on the first to 3½ annas on the last. He is still favourably situated as compared with the wealthy taxpayer in England whose ordinary income tax would reach 5*s*. in the pound, while the super-tax might extend to anything up to 3*s*. 6*d*.

"The materials for an estimate of the probable yield of the super-tax are not as adequate as we should have wished owing to the fact that under the existing Act the profits of companies and interest on securities are assessed to income-tax at the source without reference to their ultimate destination, so that we have no particulars of their distribution between people who will in future be liable to the super-tax and those who will not be liable. On such information, however, as we can obtain we take the probable yield at £ 1,350,000.

"The next source from which we propose to raise revenue is the export tax on jute. This was imposed in the current year at the rate of Rs. 2-4-0 per bale of 400 lbs. in the case of raw jute, with a special rate of 10 annas per bale on cuttings; and as regards manufactured jute at Rs. 10 per ton on 'sackings' and Rs. 16 on 'hessians.' Having regard to India's monopolist position in respect of jute production, which enables taxation to be normally passed on to the consumer, we propose to double the rates abovementioned and thus to obtain an additional revenue of £ 500,000.

"The taxation already described will yield us in all £ 1,850,000. The way in which we propose to make the bulk of the remaining provision required is one which will, I think, be received with satisfaction in this Council and in the country generally, while the incidence of the tax will be of much more general application than that of the imposts above described. It will be remembered that in introducing the Financial Statement for the current year, I said that we had been anxious to raise the duty on imported cotton goods, while leaving the cotton excise duty, which has formed the subject of such widespread criticism in this country, unenhanced, subject to the possibility of its being altogether abolished when financial circumstances are more favourable. But His Majesty's Government held that in the then circumstances such a course would be undesirable, and decided to leave the cotton duties question to be considered later on 'in connection with the general fiscal policy which may be thought best for the Empire and the share, military and financial, that has been taken by India in the present struggle'. To-day I am able to announce that in view of the taxation required to make our war contribution worthy of India and of the place we desire her to hold in the Empire, His Majesty's Government have now given their consent to our raising the import duty on cotton goods from 3½ per cent. as it now is, to 7½ per cent, which is our present general tariff rate. The cotton excise duty will remain at 3½ per cent. There can be no question of our doing away with an impost which is estimated to produce about £ 320,000 next year at a time when we have to impose extra taxation. By this means we estimate that we can get an additional £1 million. I am sure that the action of His Majesty's Government, following as it does on their recent association of India with the special Imperial Conference called in connection with the war and the measures to be taken thereafter, will meet with the greatest appreciation in India.

"Finally, we have decided to impose, as a war measure, a surcharge on railway goods traffic at the rate of one pie a maund on coal, coke and firewood and two pies a maund on other articles. We have advisedly taken a low uniform rate so as to avoid, as far as possible, the necessity for special adjustments in regard to short distances or particular classes of traffic. Some details in respect of this taxation are still under consideration, but the action necessary in connection with its imposition will be taken as soon as possible. The yield is estimated approximately at £½ million, and we thus obtain the amount that we require to finance our War contribution, and leave ourselves with a surplus £130,000, which is little enough having regard to the circumstances of the time."

The New Loan:—It was desirable, from every point of view, that as large a portion of the India share in the cost of the war of £100 millions as possible should be discharged from borrowings in India. It has been pointed out that one source of embarrassment to the Indian finances was the very large sums spent in India on account of the Home Government. It was

necessary to raise a very large capital sum in order to meet these expenses. Next the interest and sinking fund charges will amount to £ 6 millions sterling a year: it was desirable that these should be distributed in India instead of being remitted to London. But the scope of the Indian market is limited; it was considered phenomenal when a sum of Rs. 7½ crores or about £ 5 millions was raised in India in one year; it was obvious then that the loan would have to be of a special character. In summarising his proposals under this head the Finance Member said:—

"The first option which we offer to the public is a long term loan issued at Rs.95, with interest at 5 per cent; redeemable from 1929 onwards and in any case not later than 1947; supported by a special sinking fund; and carrying conversion rights in respect of all our existing long-term issues. That is the offer we make to the man who desires a semi-permanent investment.

"We feel, however, that this will not do for the banks and financial houses, as well as many others who are willing to make a great effort in support of the War Loan but cannot, in justice to themselves, afford to lock up their money for an indefinite period. Indeed for such persons even a five year period may be too long. What we want to get is a maximum response, and we wish therefore to meet every requirement. We propose, therefore, also to issue short-term bonds, with three or five years' currency at the option of the purchaser and carrying a very attractive rate of interest. We originally proposed to fix this at 6 per cent. with liability to income-tax, but on expert advice as to the importance attached to freedom from income-tax present and future, we have decided to adopt an income-tax free rate of 5½ per cent. But—and here we follow the precedent set by the Home Government in respect of their *ex*-income-tax borrowing—we do not extend this exemption to super-tax.

"We are also adopting a further method, which is intended to be a permanent measure, to bring the Government into relation with investors of a smaller class than it has hitherto reached, and which will have no time limit in respect of contributions thereby receivable.

It is proposed, with effect from 1st April, that small Government bonds or certificates of the eventual value, after five years, of Rs. 10, 20, 50, and 100 shall be constantly on sale at post offices, and that the amounts for which they can be purchased shall be so fixed that the amount repaid at the end of five years, that is the full face value of the certificate, shall represent a return of about 5½ per cent. compound interest. Thus, a Rs. 10 certificate will be purchasable for Rs. 7-12-0, a Rs. 20 certificate for Rs. 15-8-0, a Rs. 50 certificate for Rs. 38-12-0, and a Rs. 100 one for Rs. 77-8-0.

The following specimens table for a Rs. 10 *bond* shows how this *system will work* out as regards whole years, and the gradual increase in value of the original investment.

	Rs.	A.	P.
Amount paid on purchase	7	12	0
Due at the end of 1st year	8	1	0
,, 2nd ,, ...	8	7	0
,, 3rd ,, ...	8	14	0
,, 4th ,, ...	9	6	0
,, 5th ,, ...	10	0	0

"The amounts paid on these certificates will be free of income-tax, and the certificates will be kept, if the holder so desires, in the custody of the Postal Accountant General."

Reception of the Budget:—The Budget was accorded a very wide measure of popular approval. The contribution to the war was regarded as large, larger than most Indian publicists had expected; nevertheless it was unanimously approved. The distribution of the cost of this contribution was also generally approved. It has been felt that Indian finance in the past has been to much devoted to the mere raising of revenue, without paying regard to the re-distribution of wealth. One result of this is that in the past the wealthy man in India has escaped very lightly, and this has tended to concentrate a very large amount of wealth in very few hands. The rich will now pay a fairer share towards the revenues of the country. The partial removal of the Cotton Excise Duties was also immensely appreciated, although there were a few anxious moments when Parliament showed a tendency, under the influence of the Lancashire vote, to go back on this decision. The point in the Budget which raised most discussion was that which charged limited liability companies with super-tax on their reserves, save in respect such sum as might be legitimately set aside for depreciation. This arose from one of the distinguishing features of Indian joint stock finance. Indian industry suffers from a scarcity of loanable capital. In order to circumvent this, many Indian joint stock enterprises were started with a small subscribed capital, the additional money required being raised in the form of capital debt. This capital debt has been gradually discharged out of profits in good years, and extensions financed from the same source. Without these expedients Indian joint stock enterprise could not have made the progress that is recorded in the last quarter of a century. This is especially the case when we remember that the Indian investor is always anxious to divide profits up to the hilt, and that ample reserves can be built up only when a majority of the shares is in strong hands. It is felt that the levy of the super-tax on the reserves will encourage the practice of dividing profits up to the hilt, and that it will thereby add to the fluctuations characteristic of Indian industry. These objections were met in part by an amendment of the Bill which allowed ten per cent of the profits to be set aside to reserve, free of super-tax, in addition to the provision for depreciation; and but in the opinion of cautious financiers that concession does not go far enough to meet the special needs of Indian finance. The terms of the new loan were warmly approved, and an active campaign was set atoot throughout the country in *order to make it a success*. A feature of the subscriptions was the large amount forthcoming from small investors through the purchase of cash certificates, and the large subscriptions from joint stock companies, chiefly in the form of three year war bonds. The total amount of the subscription was Rs. 47 crores, which although it may seem small in comparison with the gigantic sums raised in Europe and America, is an immense sum for India.

The details of the budget are set out in the following table. As the manner in which the great heads of income like land revenue, railways, irrigation and customs are realised is described in separate articles (*q. v.*) they need not detain us here:—

	Accounts, 1915-1916.	Revised Estimate, 1916-1917.	Budget Estimate, 1917-1918.
REVENUE.			
Principal Heads of Revenue—	£	£	£
Land Revenue	22,031,161	22,063,500	22,261,500
Opium	1,913,514	3,153,100	3,389,300
Salt	3,647,587	4,785,900	3,972,900
Stamps	5,4[illegible]3,732	5,820,900	5,965,400
Excise	8,632,209	9,152,500	9,291,700
Customs	5,873,886	8,609,000	9,394,800
Other Heads	5,334,386	7,059,500	8,554,900
TOTAL PRINCIPAL HEADS	52,866,375	60,684,500	62,830,500
Interest	1,096,417	1,110,100	2,095,700
Post and Telegraphs	3,787,478	4,176,700	4,345,700
Mint	101,918	624,600	139,100
Receipts by Civil Departments	1,579,904	1,694,400	1,706,300
Miscellaneous	679,488	806,500	743,000
Railways: Net Receipts	17,977,103	20,981,600	20,253,000
Irrigation	4,779,079	4,979,500	5,125,300
Other Public Works	304,035	306,800	285,200
Military Receipts	1,241,740	1,469,800	1,327,100
TOTAL REVENUE	84,413,537	96,834,500	98,850,900
DEFICIT	1,188,661	....	....
TOTAL	85,602,198	96,834,500	98,850,900
EXPENDITURE.			
Direct Demands on the Revenues	9,467,370	9,483,700	10,026,100
Interest	1,190,364	791,800	6,832,800
Post and Telegraphs	3,149,680	3,555,600	3,601,900
Mint	89,373	1[illegible]2,500	115,800
Salaries and Expenses of Civil Departments	18,868,215	19,640,100	20,920,100
Miscellaneous Civil Charges	5,128,675	5,393,00	5,577,200
Famine Relief and Insurance	1,000,000	1,000,000	1,000,000
Railways: Interest and Miscellaneous Charges	13,901,665	14,185,300	14,147,400
Irrigation	3,721,096	3,687,600	3,834,100
Other Public Works	5,451,727	4,726,400	5,5[illegible]6,500
Military Services	23,503,093	26,819,800	27,227,100
TOTAL EXPENDITURE, IMPERIAL AND PROVINCIAL	85,471,258	89,455,500	98,819,300
Add—Provincial Surpluses, that is, portion of allotments to Provincial Governments not spent by them in the year.	335,711	1,590,200	230,400
Deduct—Provincial Deficits, that is, portion of Provincial Expenditure defrayed from Provincial Balances	204,771	28,700	328,600
TOTAL EXPENDITURE CHARGED TO REVENUE	85,602,198	91,017,000	98,721,100
SURPLUS	....	5,817,500	129,800
TOTAL	85,602,198	96,834,500	98,850,900

THE LAND REVENUE.

The principle underlying the Land Revenue system in India has operated from time immemorial. It may be roughly formulated thus—the Government is the supreme landlord and the revenue derived from the land is equivalent to rent. On strictly theoretical grounds, exception may be taken to this statement of the case. It serves, however, as a substantially correct description of the relation between the Government and the cultivator. The former gives protection and legal security. The latter pays for it according to the value of his holding. The official term for the method by which the Land Revenue is determined is "Settlement." There are two kinds of settlement in India—Permanent and Temporary. Under the former the amount of revenue has been fixed in perpetuity, and is payable by the landlord as distinguished from the actual cultivator. The Permanent Settlement was introduced into India by Lord Cornwallis at the close of the eighteenth century. It had the effect intended of converting a number of large revenue farmers in Bengal into landlords occupying a similar status to that of landowners in Europe. The actual cultivators became the tenants of the landlords. While the latter became solely responsible for the payment of the revenue, the former lost the advantage of holding from the State. This system has prevailed in Bengal since 1795 and in the greater part of Oudh since 1859. It also obtains in certain districts of Madras.

Temporary Settlements.

Elsewhere the system of Temporary Settlements is in operation. At intervals of thirty years, more or less, the land in a given district is subjected to a thorough economic survey, on the basis of the trigonometrical and topographic surveys carried out by the Survey Department of the Government of India. Each village area, wherever the Temporary Settlement is in vogue, has been carefully mapped, property-boundaries accurately delineated, and records of rights made and preserved. Under the Permanent Settlement in Bengal the occupant does not enjoy these advantages. The duty of assessing the revenue of a district is entrusted to Settlement Officers, members of the Indian Civil Service specially delegated for this work. The duties of a Settlement Officer are thus described in Strachey's *India* (revised edition, 1911):—"He has to determine the amount of the Government demand, and to make a record of all existing rights and responsibilities in the land. He has a staff of experienced subordinates, almost all of whom are natives of the country, and the settlement of the district assigned to him is a work which formerly required several years of constant work. The establishment of agricultural departments and other reforms have however led to much simplification of the Settlement Officer's proceedings, and to much greater rapidity in the completion of the Settlements. All the work of the settlement officer is liable to the supervision of superior officers, the assessments proposed by him require the sanction of the Government before they become finally binding; and his judicial decisions may be reviewed by the Civil Courts. It is the duty of the settlement officer to make a record of every right which may form the subject of future dispute, whether affecting the interests of the State or of the people. The intention is to alter nothing, but to maintain and place on record that which exists."

The Two Tenures.

Under the Temporary Settlement land tenures fall into two classes—peasant-holdings and landlord-holdings, or *Ryotwari* and *Zemindari* tenures. Broadly speaking, the difference between the two in a fiscal sense is that in Ryotwari tracts the *ryot* or cultivator pays the revenue direct; in *Zemindari* tracts the landlord pays on a rental assessment. In the case of the former, however, there are two kinds of *Ryotwari* holdings—those in which each individual occupant holds directly from Government, and those in which the land is held by village communities, the heads of the village being responsible for the payment of revenue on the whole village area. This latter system prevails in the North. In Madras, Bombay, Burma and Assam, ryotwari tenure is on an individual basis, and the Government enters into a separate agreement with every single occupant. The basis of assessment on all classes of holdings is now more favourable to the cultivator than it used to be. Formerly what was believed to be a fair average sum was levied on the anticipated yield of the land during the ensuing period of settlement. Now the actual yield at the time of assessment alone is considered, so that the cultivator gets the whole of the benefit of improvements in his holding subsequently brought about either by his own enterprise or by "unearned increment." The Government, however, may at a new settlement re-classify a holding so as to secure for itself a fair share in an increment that may have resulted from public works in the vicinity, such as canals and railways, or from a general enhancement of values. But the principle that improvements effected by private enterprise shall be exempt from assessment is now accepted by the Government and provided for in definite rules.

Incidence of the Revenue.

The incidence of the revenue charges varies according to the nature of the settlement, the class of tenure, and the character and circumstances of the holding. Under the Permanent Settlement in Bengal Government derive rather less than £3,000,000 from a total rental estimated at £12,000,000. Under Temporary Settlements, 50 per cent. of the rental in the case of *Zemindari* land may be regarded as virtually a maximum demand. In some parts the impost falls as low as 35 and even 25 per cent. and only rarely is the proportion of one-half the rental exceeded. In regard to *Ryotwari* tracts it is impossible to give any figure that would be generally representative of the Government's share. But one-fifth of the gross produce is the extreme limit, below which the incidence of the revenue charge varies greatly. About twelve years ago the Government of India were invited in an influentially signed memorial to fix one-fifth of the gross produce as the maximum Government

demand. In reply to this memorial and other representations the Government of India (Lord Curzon being Viceroy) issued a Resolution in defence of their Land Revenue Policy. In it it was stated that "under the existing practice the Government is already taking much less in revenue than it is now invited to exact" and "the average rate is everywhere on the down grade." This Resolution, together with the statements of Provincial Governments on which it was based, was published as a volume; it is still the authoritative exposition of the principles controlling the Land Revenue Policy of the Government of India. In a series of propositions claimed to be established by this Resolution the following points are noted:—(1) In *Zemindari* tracts progressive moderation is the key-note of the Government's policy, and the standard of 50 per cent. of the assets is more often departed from on the side of deficiency than excess; (2) in the same areas the State does not hesitate to interfere by legislation to protect the interests of the tenants against oppression at the hands of the landlords; (3) in *Ryotwari* tracts the policy of long-term settlements is being extended, and the proceedings in connection with new settlements simplified and cheapened; (4) local-taxation (of land) as a whole is neither immoderate nor burdensome; (5) over-assessment is not, as alleged, a general or widespread source of poverty, and it cannot fairly be regarded as a contributory cause of famine. At the same time the Government laid down as principles for future guidance—(*a*) large enhancements of revenue, when they occur, to be imposed progressively and gradually, and not *per saltum*; (*b*) greater elasticity in revenue collection, suspensions and remissions being allowed according to seasonal variations and the circumstances of the people; (*c*) a more general resort to reduction of assessments in cases of local deterioration.

Protection of the Tenants.

In regard to the second of the five propositions noted above, various Acts have been passed from time to time to protect the interests of tenants against landlords, and also to give greater security to the latter in possession of their holdings. The Oudh Tenancy Act of 1886 placed important checks on enhancement of rent and eviction, and in 1900 an Act was passed enabling a landowner to entail the whole or a portion of his estate, and to place it beyond the danger of alienation by his heirs. The Punjab Land Alienation Act, passed at the instance of Lord Curzon, embodied the principle that it is the duty of a Government which derives such considerable proportion of its revenue from the land, to interfere in the interests of the cultivating classes. This Act greatly restricted the credit of the cultivator by prohibiting the alienation of his land in payment of debt. It had the effect of arresting the process by which the Punjab peasantry were becoming the economic serfs of money-lenders. A good deal of legislation affecting land tenure has been passed from time to time in other provinces, and it has been called for more than once in Bengal, where under the Permanent Settlement (in the words of the Resolution quoted above), "so far from being generously treated by the Zemindars, the Bengal cultivator was rack-rented, impoverished, and oppressed."

Government and Cultivator.

While the Government thus interferes between landlord and tenant in the interests of the latter, its own attitude towards the cultivator is one of generosity. Mention has already been made of the great advantage to the agricultural classes generally of the elaborate systems of Land Survey and Records of Rights carried out and maintained by Government. In the Administration Report of Bombay for 1911-12, it is stated:—"The Survey Department has cost the State from first to last many lakhs of rupees. But the outlay has been repaid over and over again. The extensions of cultivation which have occurred (by allowing cultivators to abandon unprofitable lands) have thus been profitable to the State no less than to the individual; whereas under a *Zemindari* or kindred system the State would have gained nothing, however much cultivation had extended throughout the whole of 30 years' leases." On the other hand, the system is of advantage to the *ryots* in reducing settlement operations to a minimum of time and procedure. In the collection of revenue the Government consistently pursues a generous policy. In times of distress suspensions and remissions are freely granted after proper inquiry.

The amount of gross revenue raised on the land is estimated in 1917-18 at £22,261,900 out of a total from all sources in the same year of £86,109,600. This compares very favourably with the £34,000,000 of land revenue recorded as having been raised annually from a smaller empire by Aurangzebe.

The literature of the subject is considerable. The following should be consulted by readers who require fuller information:—"Land Revenue Policy of the Indian Government," 1902 (Superintendent of Government Printing); Baden Powell's "Land Systems of British India"; Sir John Strachey's "India, its Administration and Progress, 1911," (Macmillan & Co.); M. Joseph Chailley's "Administrative Problems of British India" (Macmillan & Co., 1910), and the Annual Administration Reports of the respective Provincial Governments.

EXCISE.

The Excise revenue in British India is derived from the manufacture and sale of intoxicating liquors, hemp, drugs, toddy and opium. It is a commonplace amongst certain sections of temperance reformers to represent the traffic in intoxicating liquors as one result of British rule. There is, however, abundant evidence to show that in pre-British days the drinking of spirituous liquors was commonly practised and was a source of revenue.

The forms of intoxicating liquor chiefly consumed are country spirit; fermented palm juice; beer made from grain; country brands of rum, brandy, etc., locally manufactured malt beer and imported wine, beer and spirits. Country spirit is

the main source of revenue, except in the Madras Presidency, and yields about two-thirds of the total receipts from liquors. It is usually prepared by distillation from the Mowra flower, molasses and other forms of unrefined sugar, fermented palm juice and rice. In Madras a very large revenue is derived from fresh toddy. The British inherited from the Native Administration either an uncontrolled Out-Still System or in some cases a crude Farming System and the first steps to bring these systems under control were the limitation of the number of shops in the area farmed, and the establishment of an improved Out-Still System under which the combined right of manufacture and sale at a special shop was annually granted. This of course was a kind of control, but it only enabled Government to impose haphazard taxation on the liquor traffic as a whole by means of vend fees. It did not enable Government to graduate the taxation accurately on the still-head duty principle nor to insist upon a standard of purity or a fixed strength of liquor Moreover for political and other reasons the extent of control could not at first be complete. There were tribes of aborigines who regarded the privilege of making their own liquor in their private homes as a long established right; and who believed that liquor poured as libations to their god should be such as had been made by their own hands. The introduction of any system amongst those peoples had to be worked very cautiously. Gradually, as the Administration began to be consolidated, the numerous native pot-stills scattered all over the country under the crude arrangements then in force began to be collected into Central Government enclosures called Distilleries, thus enabling Government to perfect its control by narrowing the limits of supervision; and to regularize its taxation by imposing a direct still-head duty on every gallon issued from the Distillery. Under Distillery arrangements it has also been possible to regulate and supervise thoroughly the manufacture of liquor and its disposal subsequent to its leaving the Distillery by means of a system of transport passes, establishment supervision, improved distribution and vend arrangements.

Various Systems.

The Out-Still System may be taken to include all systems prior in order of development to the imposition of Still-head duty. Briefly stated the stages of development have been—First: farms of large tracts; Second: farms of smaller areas; Third: farms of the combined right to manufacture and sell at particular places without any exclusive privilege over a definite area; Fourth: farms of similar right subject to control of means and times for distilling and the like. The Provincial Governments have had to deal with the subject in different ways suited to local conditions, and so the order of development from the lower forms of systems to the higher has not been always everywhere identical in details. Yet in its essence and main features the Excise Administration in most provinces of British India has progressed on uniform lines the key note lying in attempts, where it has not been possible to work with the fixed duty system in its simplest forms, to combine the farming and fixed duty systems with the object of securing that every gallon of spirit should bear a certain amount of taxation. The Out-Still System has in its turn been superseded by either the Free-supply system or the District Monopoly system. The Free-supply system is one of free competition among the licensed distillers in respect of manufacture. The right of vend is separately disposed of. The District monopoly system on the other hand is one in which the combined monopoly of manufacture and sale in a district is leased to a farmer subject to a certain amount of minimum still-head duty revenue in the monopoly area being guaranteed to the State during the term of the lease.

The recommendations of the Indian Excise Committee of 1905-06 resulted in numerous reforms in British India, one of them being that the various systems have been or are gradually being superseded by the Contract Distillery System under which the manufacture of spirit for supply to a district is disposed of by tender, the rate of still-head duty and the supply price to be charged are fixed in the contract and the right of vend is separately disposed of. This is the system that now prevails over the greater portion of British India. The other significant reforms have been the revision of the Provincial Excise Laws and regulations, and the conditions of manufacture, vend, storage and transport, an improvement in the quality of the spirit, an improved system of disposal of vend licenses, reductions and re-distributions of shops under the guidance and control of local Advisory Committees and gradual enhancement of taxation with a view to checking consumption.

Since the issue of the report of the Excise Committee, 1905-06, no less than 213,000 square miles of territory were transferred from the out-still to the distilling system. In 1905-06 39 per cent. of the total excise area and 28 per cent. of the population of that area were served by out-stills, the proportions in 1912-13 were only 15 and 8 per cent. respectively.

The incidence of the total revenue derived from country distillery spirits per proof gallon during the quinquennium 1908-09 to 1912-13 was as follows:—

1908-09	..	..	.. Rs.	5·52
1909-10	..	..	.. ,,	5·72
1910-11	..	..	.. ,,	5·49
1911-12	..	..	.. ,,	5·84
1912-13	..	..	.. ,,	6·05

In the last year the incidence was highest in Berar 7·24 and lowest in Behar and Orissa 3·28. The average consumption of country spirits per 100 of the population in the distillery areas during the above period was as follows—

1908-09	..	..	Gallons	L. P. 4·43
1909-10	..	..	,,	,, 4·11
1910-11	..	..	,,	,, 4·40
1911-12	..	..	,,	,, 4·52
1912-13	..	..	,,	,, 4·75

In 1912-13 it was highest in Bombay 15·22 and lowest in Bengal 2·13.

Sap of the date, palmyra, and cocoanut palms called toddy, is used as a drink either fresh or after fermentation. In Madras and Bombay the revenue is obtained from a fixed fee on every tree from which it is intended to draw the liquor

and from shop license fees. In Bengal and Burma the sale of shop licenses is the sole form of taxation. Country brands of rum, and so-called brandies and whiskies, are distilled from grape juice, etc. The manufacture is carried out in private distilleries in various parts of India. A number of breweries has been established, mostly in the hills, for the manufacture of a light beer for European and Eurasian consumption. The uniform fee of 4 annas 6 pies per gallon is levied all over India at the time of issue.

Foreign liquor is subject to an import duty at the tariff rates, the most important of which is Rs 11-4-0 per proof gallon on spirit and 4 annas 6 pies per gallon on beer. It can only be sold under a license.

Since the war Brandy and Whisky are manufactured in considerable quantities at Baroda. The base used is the Mhowra flower. It is drunk in big towns as a substitute for German spirit, and is excised at tariff rates.

DRUGS.—The narcotic products of the hemp plant consumed in India fall under three main categories, namely, ganja or the dry flowering tops of the cultivated female hemp plant; charas, or the resinous matter which forms an active drug when collected separately: and bhang or the dried leaves of the hemp plant whether male or female cultivated or uncultivated. The main features of the existing system are restricted cultivation under supervision, storage in Bonded Warehouses, payment of a quantitative duty before issue, retail sale under licenses and restriction on private possession. Licenses to retail all forms of hemp drugs are usually sold by auction

OPIUM.—Opium is consumed in all provinces in India. The drug is commonly taken in the form of pills, but in some places, chiefly on social and ceremonial occasions, it is drunk dissolved in water. Opium smoking also prevails in the City of Bombay and other large towns. The general practice is to sell opium from the Government Treasury, or a Central Warehouse, to licensed vendors. The right of retail to the public is sold by annual auction to one or several sanctioned shops.

The opium revenue in 1917-18 is estimated at £3,389,300, and the Excise revenue at £1,191,770.

SALT.

The salt revenue was inherited by the British Government from Native rule, together with a miscellaneous transit dues. These transit dues were abolished and the salt duty consolidated and raised. There are four great sources of supply; rock salt from the Salt range and Kohat Mines in the Punjab; brine salt from the Sambhar Lake in Rajputana, salt brine condensed on the borders of the lesser Rann of Cutch; and sea salt factories in Bombay, Madras and at the mouth of the Indus.

The Salt Range mines contains an inexhaustible supply. They are worked in chambers excavated in salt strata, some of which are 250 feet long, 45 feet wide and 200 feet high. The Rajputana supply chiefly comes from the Sambhar Lake where brine is extracted and evaporated by solar heat. In the Rann of Cutch the brine is also evaporated by solar heat and the product is known as Baragara salt. In Bombay and Madras sea water is let into shallow pans on the sea-coast and evaporated by solar heat and the product sold throughout India. In Bengal the damp climate together with the large volume of fresh water from the Ganges and the Brahmaputra into the Bay of Bengal render the manufacture of sea salt difficult and the bulk of the supply, both for Bengal and Burma, is imported from Liverpool, Germany, Aden, Bombay and Madras.

Broadly, one-half of the indigenous salt is manufactured by Government Agency, and the remainder under license and excise systems. In the Punjab and Rajputana the salt manufactories are under the control of the Northern India Salt Department, a branch of the Finance Department. In Madras and Bombay the manufactories are under the supervision of Local Governments. Special treaties with Native States permit of the free movement of salt throughout India, except from the Portuguese territories of Goa and Damaun, on the frontiers of which patrol lines are established to prevent the smuggling of salt into British India.

From 1888-1903 the duty on salt was Rs. 2-8 per maund of 82 lbs. In 1903, it was reduced to Rs. 2; in 1905 to Rs. 1-8; in 1907 to Re 1 and in 1916 it was raised to Rs. 1-4-0. The successive reductions in duty have led to a largely increased consumption, the figures rising by 25 per cent. between 1903-1908. To illustrate the growth of consumption, in 1902-03, with a tax of Rs. 2-8-0 per maund, the revenue was £5,586,068, for 1916-17 with a duty of Re. 1-4-0, the estimated revenue is £3,972,900.

CUSTOMS.

The import duties have varied from time to time according to the financial condition of the country. Before the Mutiny they were five per cent.; in the days of financial stringency which followed they were raised to 10 and in some cases 20 per cent. In 1875 they were reduced to five per cent., but the opinions of Free Traders, and the agitation of Lancashire manufacturers who felt the competition of the Indian Mills, induced a movement which led to the abolition of all customs dues in 1882. The continued fall in exchange compelled the Government of India to look for fresh sources of revenue and in 1894 five per cent. duties were imposed, yarns and cotton fabrics being excluded. Continued financial stringency brought piece-goods within the scope of the tariff, and after various expedients the demands of Lancashire were satisfied by a general duty of 3½ per cent. on all woven goods—an import duty on goods by sea, an excise duty on goods produced in the country. The products of the hand-looms are excluded. These excise duties are intensely unpopular in India, for reasons set out in the special article dealing with the subject. In 1910-11, in order to meet the deficit threatened by the loss of the revenue on opium exported to China, the silver duty was raised

from 5 per cent. to 4d. an ounce, and higher duties levied on petroleum, tobacco, wines, spirits, and beer. These were estimated to produce £1 million annually.

The Customs Schedule was completely recast in the Budget of 1916-17 in order to provide additional revenue to meet the financial disturbance set up by the war. The general import tariff, which had been at the rate of 5 per cent. *ad valorem*, since 1894 was raised to 7½ per cent. *ad valorem*, except in the case of sugar; as India is the largest producer of sugar in the world the import duty on this staple was fixed at 10 per cent. There was also a material curtailment of the free list. The principal article of trade which was not touched was cotton manufactures. For the past twenty years the position has been that cotton twists and yarns of all kinds are free of duty while a duty at the rate of 3½ per cent. is imposed on woven goods of all kinds whether imported or manufactured in Indian mills. The Budget left the position as it stood. The Government of India would have been glad to see the tariff raised to 5 per cent. without any corresponding alteration of the excise, but were over-ruled by the Cabinet on the ground that this controversial matter must come up for discussion after the war. Finally the Budget imposed export duties on tea and jute. In the case of tea the duty was fixed at Re. 1-8-0 per 100 lbs.; in the case of jute the export duty on raw jute was fixed at Rs. 2-4-0 per bale of 400 lbs., approximately equivalent to an *ad valorem* duty of 5 per cent.; manufactured jute was charged at the rate of Rs. 10 per ton on sacking and Rs. 16 per ton on Hessians.

The Customs Tariff was further materially modified in the Budget for 1917–18. In the previous year an export duty on jute was imposed at the rate of Rs. 2-4-0 per bale of 400 lbs. in the case of raw jute and Rs. 10 per ton on sackings, and Rs. 16 per ton on Hessians; these rates were doubled, with a view to obtaining an additional revenue of £500,000. The import duty on cotton goods was raised from 3½ per cent. to 7½ per cent. without any alteration in the Excise, which remained at 3½ per cent. This change was expected to produce an additional revenue of £1,000,000. The question of the Excise was left untouched, for the reason, amongst others, that the Government could not possibly forego the revenue of £320,000, which it was expected to produce. With these changes in operation the revenue from Customs in 1917–18 was estimated at £9,394,800.

The Customs Department is administered by an Imperial Customs Service responsible to the Imperial Government in the Department of Commerce and Industry, but acting through the Local Governments. The senior Collectors are Covenanted Civilians specially chosen for this duty; the subordinates are recruited in India and in England (**Customs Tariff q. v.**)

Income Tax.

The income tax was first imposed in India in 1860, in order to meet the financial dislocation caused by the Mutiny. It was levied at the rate of four per cent. or a little more than 9½ d. in the pound on all incomes of five hundred rupees and upwards. Many changes have from time to time been made in the system, and the present schedule was consolidated in the Act of 1886. This imposed a tax on all incomes derived from sources other than agriculture which were exempted. On incomes of 2,000 rupees and upwards it fell at the rate of five pies in the rupee, or about 6¼d. in the pound; on incomes between 500 and 2,000 rupees at the rate of four pies in the rupee or about 5d. in the pound. In March 1903 the *minimum taxable income* was raised from 500 to 1,000 rupees. The income-tax schedule was completely revised, raised, and graduated in the Budget of 1916-17 in the general scale of increased taxation imposed to meet the deficit arising out of war conditions. All existing exemptions were left untouched and no alteration was made in the taxation of persons whose incomes, official or private, were less than Rs. 5,000 per annum. In the case of incomes which exceeded the sum of Rs. 5,000 per annum the tax was enhanced in the following way:—

(1) Incomes from Rs. 5,000 to Rs. 9,999 pay 6 pies in the rupee, or 7½d. per pound.
(2) Incomes from Rs. 10,000 to Rs. 24,999 say 9 pies in the rupee, or 11¼d. in the pound.
(3) Incomes of Rs. 25,000 and upwards pay 1 anna in the rupee, which is equivalent to 1s. 3d. in the pound.

Profits of companies are assessed at the 1 anna rate; but this is subject to abatement or exemption, to individual shareholders who can show that their total income is such as to warrant a lower rate of taxation or none at all. Thus a shareholder whose income is less than Rs. 1,000 per annum from all sources obtains a refund of the entire tax previously recovered on his dividends; a man whose total income is Rs. 5,000 obtains a refund of the amount recovered in excess of the 6 pie rate; and so on.

In the Budget of 1917–18 the income tax was left untouched; but there was imposed a super-tax.

The super-tax begins in respect of income exceeding Rs. 50,000 and is levied on the following scale:—

For every rupee of the first Rs. 50,000 of the excess, *i.e.*, between Rs. 50,000 and 1 lakh: 1 anna per rupee.

For every rupee of the next Rs. 50,000 of the excess, *i.e.*, between 1 and 1½ lakhs: 1½ annas per rupee.

For every rupee of the next Rs. 50,000 of the excess, *i.e.*, between 1½ and 2 lakhs: 2 annas in the rupee.

For every rupee of the next Rs. 50,000 of the excess, *i.e.*, between 2 and 2½ lakhs: 2½ annas per rupee.

For every rupee of the next Rs. 50,000 of the excess, *i.e.*, on everything over 2½ lakhs: 3 annas per rupee.

These rates are, of course, in addition to the standard income tax at the rate of 1 anna in the rupee. The maximum income tax levied on this scale amounted to five shillings in the pound, income tax and super-tax combined.

The total yield of the income tax in the current year is estimated at £5,129,800 of which the super-tax will contribute £1,350,000.

THE DEBT.

To understand the debt of India it must be remembered that the Government of India is always a borrower. The country still needs a vast capital expenditure both on Railways and Irrigation; indeed the expenditure on railways is always conditioned not by the needs of the country, but by the ability of the market to supply capital—a supply which is always unequal to the demand. In the case of irrigation the supply of capital has of late years been equal to the amount which could be spent; great irrigation schemes require long and elaborate investigation and when the investigations are complete the actual construction of the works is governed by the labour supply, which is increasingly expensive and rarely equal to the demand. These conditions make India a constant borrower, and she raises every year as much money as the Indian and London money markets can supply. The whole of this money is spent on productive works. The Indian railway system now returns to the State, after paying all interest charges and certain annuities for the redemption of capital, a surplus which varies with the character of the season. The irrigation works return a profit of over five per cent. Whilst therefore India is a constant borrower, she borrows only for expenditure on productive works. Her finance is even more conservative than this, for in most years a sum is set apart from the revenue surplus for expenditure on capital works. Through the operation of this policy the unproductive debt of India has been reduced to negligible proportions. It has been estimated by competent financiers that if a fair balance sheet were struck the balance would be on the right side.

When the trading charter of the East India Company expired in 1835, the rupee debt was Rs. 332·95 millions. Fifteen years later, in 1850-51, the debt reached Rs. 453·36 millions, and it stood at almost exactly that sum in the year preceding the mutiny of 1857. That convulsion caused a large increase in the rupee debt which stood at Rs. 635·55 millions in 1859-60, the year following the suppression of the revolt. The debt then gradually rose to Rs. 697·57 millions by 1874-75, and another large increase occurred in the succeeding decade, due to the great famine of 1877-78 and to the military operations in Afghanistan which followed the famine. By 1883-84 the rupee debt rose to Rs. 931·25 millions. There was then a further increase to Rs. 980·4 millions in 1887-88, to Rs. 1,007·48 millions in 1888-89, and to Rs. 1,052·8 millions in 1893-94. A three per cent. loan was raised in July 1896, and the debt stood at Rs. 1,082·12 millions at the end of 1896-97 and increased to Rs. 1,191·99 millions in 1903-04, to Rs. 1,258·75 millions in 1905-06, to Rs. 1,366·67 millions in 1909-10, and to Rs. 1,397·93 millions in 1911-12.

A four per cent. terminable loan of Rs. 4½ crores (£3 millions) was issued in 1915, and another of Rs. 6·77 crores in 1916. The present dimensions of the debt are given below under the head of "Interest."

Sterling Debt.

The interest-bearing sterling debt was very small until the mutiny year, but the increase was rapid after that. As in India, the rate of interest on the sterling debt has been gradually reduced from 4, 4½, and 5 per cent. to 2½, 3, and 3½ per cent. respectively. At the end of 1910-11 proportions of the debt held at these rates are £11,892,207 at 2½ per cent., £66,724,530 (including 3 per cent., India stock of the nominal value of £3,000,000 issued in August 1900, £2,009,500 issued in 1901-02, £1,500,000 issued in May 1902, £1,500,000 issued in 1903-04, £2,500,000 issued in 1904-05, £12,089,146 issued in 1905-06, and £2,000,000 issued in 1906-07) at 3 per cent. and £85,511,748 at 3½ per cent. In May 1907 a 3½ per cent. sterling loan of £3,500,000 was raised and in January 1908 a further 3½ per cent. loan of £5,000,000 was raised towards providing for railway capital expenditure of 1908-09 and for the discharge of certain Bombay, Baroda and Central India Railway debentures. Similarly in February 1909, a loan of £7,500,000 and in January 1910 a further loan of £7,500,000 were issued at the same rate of interest. In October 1910, 3½ per cent. India Bonds for £4,000,000 were issued for the discharge of the Madras and Indian Midland Railway debentures and in March 1911 a new 3½ per cent sterling loan of £3,500,000 was issued to provide funds for capital expenditure in 1911-12.

Railway Expenditure.

A large proportion both of the sterling and of the rupee debt was incurred in connection with the construction of railways and other public works. Considerable additions to the rupee and sterling debt were made in the two years 1896-97 and 1897-98 in consequence of famine, plague, war, and the prosecution of railway extension, and to the sterling debt in 1900 and subsequent years for the purchase of the G. I. P. Railway, the discharge of its debentures, and advances of Indian Railway Companies. In addition to the loans raised during 1907-08 the Secretary of State incurred liability in respect of £2,144,800 debentures of the Madras Railway Company on the purchase of the undertaking on the 31st December 1907. In the Budget of 1916-17 the total interest charges £9,957,000 are distributed as follows:—Railways £8,147,000; Irrigation £1,509,400; Interest on ordinary debt £298,900.

Interest.

The interest on the rupee debt was at the rate of six per cent. in 1822, and the debt bearing this rate was not finally paid off until 1858-59. Meanwhile the Government borrowed, from 1823 until 1852-53, at five per cent. and from 1824 (but in a small way until 1835) at four per cent. The bulk of the five per cent. debt was converted to four per cent. in 1854, but the shock to the credit of the State caused by the mutiny necessitated more borrowing at the higher rate of five per cent. and that loan was not finally extinguished until 1871. Meanwhile the Government were compelled to borrow at 5½ per cent. in 1859, and this 5½ per cent. loan was not closed until 1878-79. A small sum was borrowed at 4½ per cent. in 1856-57, and the debt at this rate of interest was largely increased in 1871 by the

conversion of the 5½ per cent. loan. By 1878-79 practically the whole rupee debt bore interest at 4½ and 4 per cent. Rs. 151·48 millions at 4½ and Rs. 613·38 millions at 4 per cent. The 4½ per cent. loans were all converted to 4 per cent. by 1893, save for a sum of Rs. 10 millions, being a loan from the Maharaja Holkar on account of the Indore State Railway, which is not convertible until about 1970. In the same year a small loan of Rs. 35·5 millions was raised at 3½ per cent. and in the following year the bulk of the 4 per cent. loans was converted to the rate of 3½ per cent. In 1896-97 a new loan of Rs. 40 millions was raised at 3 per cent. On the 4th July 1900 a loan of Rs. 30 millions was raised at 3½ per cent. and this was followed by other loans, at the same rate of interest.

The debt provided for in the Budget for 1916-17 is as follows:—

Sterling	£	174,171,829
Rupee Debt—		
Indian War Loan ..	Rs.	15,00,00,000
4 per cent.	„	21,36,7 ,000
3½ per cent.	„	1,32,00,29,000
3 per cent.	„	7,19,17,200
Other debt	„	1,10,13,900
Savings Bank Balances	„	28,37,06,699

The Budget for 1916-17 provides for an expenditure on interest of Rs. 6,63,4 ,000 in India, equivalent in sterling to £ 4,422,700: and in England of £ 11,155,800: or a total of £ 15,578,500.

Absorption of Gold in India.

(*In lakhs of Rupees*)

—	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.	1915-16.
1. Net annual addition to the stock of the country ..	16,000	18,000	27,000	25,000	18,000	7,000	1,600
2. Progressive total of additions to the stock ..	144,000	162,000	189,000	214,000	232,000	239,000	240,600
3. Held in mints and Government Treasuries and Currency and Gold Standard Reserves.. .. .	6,000	6,000	16,000	20,000	15,000	10,000	8,000
4. Net annual variation in item 3	6,000	....	10,000	4,000	—5,000	—5,000	—2,000
5. Net progressive absorption.	138,000	156,000	173,000	194,000	217,000	229,000	232,600
6. Absorption of the year ..	10,000	18,000	17,000	21,000	23,000	12,000	3,600

NOTE:—Item 1 shows the amount of gold produce in India *plus* the net imports (*i.e.*, imports *minus* exports). In 1915-16 the gold produced was £2,369,845 *minus* net exports £739,412=£1,600,000 in round figures. Item 2 shows the progressive total of the figures in item 1 to the end of each year. Total at end of 1914-15 £239 millions *plus* figure for 1915-16 £1,600,000=£240,600,000 at the end of 1915-16. Item 3 shows the reserve held in India in each year. Item 4 shows the annual variations in the actual amount held in the mints and in the reserves in India. Amount held in 1915-16 £8 millions *minus* that held in 1914-15 £10 millions is equal to £2 millions shown against this item in 1915-16. Item 5 shows the difference between item 2 (progressive total) and 3 (amounts held in the mints, etc.) £240,600,000 *minus* £8 millions=£232,600,000 during 1915-16. Item 6 shows the difference between two successive figures in item 5. £232,600,000 *minus* £229 millions=£3,600,000 during 1915-16; or, in other words, the difference between item 1 (annual addition to the stocks) and item 4 (net variation in item 3); £1,600,000 *minus* (—2,000,000), *i.e.*, £3,600,000 is the net absorption of the year.

AMOUNT of the RUPEE and STERLING DEBT and of the INTEREST thereon, annual INCREASE or REDUCTION of the DEBT; and the PROPORTION of the RUPEE DEBT held in LONDON, from 1820-21 to 1915-16.

	Registered debt in India.	Registered debt in London.	Interest payable.		Amount borrowed and paid off each year (Borrowed +; paid off—)		Proportion of the registered rupee debt held in London on 31st March.
					In India.	In England.	
	Rs.	£	Rs.	£	Rs.	£	Rs.
1820-21	27,24,77,630	5,762,888	1,63,15,400	253,247	—26,73,970	—109,268	
1830-31	33,12,96,680	3,750,479	1,74,19,770	93,377	+75,52,710	—45,413	
1840-41	29,47,65,040	1,756,992	1,35,37,050	59,856	+1,15,89,400	—400	
1850-51	45,12,87,550	3,920,592	2,12,39,750	136,482	+1,00,72,750	—100	
1860-61	63,44,58,100	28,496,917	2,88,34,460	1,249,832	—10,05,920	+4,138.000	
1861-62	63,42,08,450	32,116,217	2,88,32,440	1,457,874	—2,49,650	+3,619,300	
1862-63	63,82,11,060	31,860,017	2,89,95,320	1,430.765	+40,02,610	—253,200	(a)
1863-64	63,40,38 320	26,332.517	2,88,06,180	1,209.621	—41,72.740	—5,527,500	
1864-65	63,36,66,840	26,146,017	2,88,00,400	1,233,165	—3,71,480	—186,500	
1865-66	62,38,10,770	26,967,317	2,84,13,900	1,274,230	—98,56,070	+821,300	
1866-67	62,97,84,230	28,559,917	2,87,13.200	1,402,540	+59.73,460	+1,592,600	
1867-68	63,76,50,020	29.718,417	2,91.57.860	1,448,875	+78,65,790	+1,158,500	
1868-69	63,41,06,910	31,218,917	2,89,87,270	1,469,916	—35,43,110	+1.500,500	15,38.06,930
1869-70	65,59.34,220	35.217,617	2,98,17,500	1,629,868	+2,18,27,310	+3.998,700	16,24,51,720
1870-71	66,80,96,570	37,627,617	3,01,56,310	1,726,268	+1.21,62,350	+2,410,000	17,04,70.910
1871-72	67,96,89,420	39,012,617	2,98,08,300	1,781,618	+1.15,92,850	+1,385,000	13,56,38,630
1872-73	66,45,83,690	39,012,617	2,89,20,500	1,831.467	—1,51,05.730	....	15,04,77,110
1873-74	66,41,72,910	41,117,617	2,89,50,060	1,867,121	—4,10,780	+2,105,000	13,27,22,050
1874-75	69,84,99,590	48,597.033	3,03,35,320	2,165,364	+3,43,26,680	+7,479,416	14,95,71,800
1875-76	72,77,29,810	49,797,033	3,15,20,180	2,212,582	+2,92,30,220	+1,200,000	15,45.77,080
1876-77	71,92,31,260	55,397.033	3,10,98,710	2,436,271	—84,98,550	+5,600.000	14.21,01,660
1877-78	74,95,45,200	59,677.033	3,22,68,810	2,607,472	+3,03,13,940	+4,280,000	15,78,70.170
1878-79	78,83,89,260	59,029,117	3,25,77,260	2,581,555	+3,88,44,060	—647.916	17,14,82,760
1879-80	82,87,25,090	68,855,556	3,41,76,360	1,937,886	+4,03,35,830	+9,826.439	20,52,60,670
1880-81	85.95,97.460	71,429,133	3,55,92,700	2,846,478	+3,08,72,370	+2,573.577	20.26,31,450
1881-82	88,65,31,620	68.181,947	3,66,43,280	2,708,198	+2,69,34,160	—3,287,186	22.65,59,550
1882-83	90,68,87.660	68,585.694	3,74.11,490	2,725,748	+2,03,56,040	+443,747	22,58,11,320
1883-84	93,19,13,840	68,108,837	3,84,91,140	2,704,207	+2,50,26,180	—476,857	22,08,75,180

(a) No information.

AMOUNT of the RUPEE and STERLING DEBT—(*contd.*).

	Registered debt in India.	Registered debt in London.	Interest payable.		Amount borrowed and paid off each year (Borrowed + ; paid off—)		Proportion of the registered rupee debt held in London on 31st March.
					In India.	In England.	
	Rs.	£.	Rs.	£.	Rs.	£.	Rs.
1884–85	93,18,36,600	69,271,088	3,84,18,550	7,691,828	—77,240	+1,162,251	21,83,98,370
1885–86	92,70,39,820	73,806,621	3,77,38,380	2,833,068	—47,96,780	+4,535,533	20,71,23,580
1886–87	92,65,36,360	84,228,177	3,82,02,570	3,165,411	—5,03,460	+10,421,556	19,14,95,570
1887–88	98,08,98,620	84,140,148	4,03,78,580	2,918,039	+5,43,62,260	—88,029	20,81,88,870
1888–89	1,00,87,97,420	95,033,610	4,13,73,120	3,230,474	+2,78,98,800	+10,893,462	21,71,40,680
1889–90	1,02,76,11,750	98,192,391	4,21,56,080	3,327,348	+1,88,14,330	+3,158,781	21,59,40,490
1890–91	1,02,74,65,550	104,408,208	4,17,51,110	3,524,376	—1,46,200	+6,215,817	26,73,12,950
1891–92	1,02,69,23,170	104,404,143	4,17,15,000	3,602,349	—5,42,380	+2,995,935	27,50,58,410
1892–93	1,02,93,75,520	106,683,767	4,12,77,760	3,570,682	+24,52,350	—720,376	25,98,38,610
1893–94	1,05,54,60,780	114,113,792	4,20,92,060	3,687,986	+2,60,85,260	+7,430,025	24,16,55,410
1894–95	1,04,37,37,400	116,005,826	3,61,09,140	4,825,323	—1,17,23,380	+1,892,034	23,62,59,660
1895–96	1,03,78,89,280	115,903,732	3,64,00,740	3,607,832	—58,48,120	—102,094	25,35,07,520
1896–97	1,09,11,50,530	114,883,233	3,78,43,760	3,813,208	+5,37,61,250	—1,020,499	24,06,66,620
1897–98	1,11,69,56,340	123,274,680	3,87,11,060	3,940,776	+2,58,05,810	+8,391,447	21,50,87,030
1898–99	1,12,65,46,980	124,268,605	3,91,13,340	3,882,758	+95,90,640	+993,925	21,44,12,330
1899–1900	1,12,47,47,010	124,144,401	3,90,56,317	3,877,026	—17,99,970	—124,204	20,81,88,234
1900–01	1,15,33,19,058	133,435,377	4,00,58,600	4,158,351	+2,85,72,048	+9,290,978	22,18,12,135
1901–02	1,16,19,13,833	134,307,090	4,03,60,615	4,213,821	+85,94,775	+871,711	20,36,22,034
1902–03	1,17,55,40,660	133,796,261	4,08,37,864	4,213,537	+1,36,26,827	—510,829	18,63,35,034
1903–04	1,19,42,43,035	133,045,844	4,14,90,065	4,238,273	+1,87,02,375	—750,417	17,13,92,234
1904–05	1,22,29,78,235	132,887,191	4,24,92,526	4,282,744	+2,87,35,200	—158,653	16,81,55,234
1905–06	1,26,08,10,618	146,457,439	4,38,10,365	4,715,233	+3,78,32,383	+13,570,248	16,43,32,933
1906–07	1,30,45,50,655	147,518,634	4,53,38,937	4,743,108	+4,37,40,037	+1,061,195	16,49,16,833
1907–08	1,32,82,94,955	156,481,074	4,61,66,110	5,053,632	+2,37,44,300	+8,962,440	15,23,21,733
1908–09	1,34,56,60,505	160,973,369	4,68,19,197	5,210,695	+1,73,65,550	+4,492,295	14,43,66,433
1909–10	1,36,84,33,105	170,105,911	4,76,47,428	5,530,758	+2,27,72,600	+9,132,542	15,21,19,933
1910–11	1,38,09,72,155	177,998,335	4,81,24,302	5,668,417	+1,25,39,050	+7,892,424	12,78,49,733
1911–12	1,39,96,36,205	178,486,597	4,87,76,458	5,705,597	+1,86,64,050	+488,262	11,73,03,533
1912–13	1,42,83,64,790	179,179,193	4,97,78,481	5,749,887	+2,87,28,585	+692,596	11,20,29,433
1913–14	1,45,68,55,790	177,064,757	5,07,80,519	5,693,919	+2,84,91,000	—2,114,436	10,08,74,333
1914–15	1,50,52,65,200	176,190,358	5,25,30,534	5,682,898	+4,84,09,410	— 874,399	9,72,99,850
1915–16	1,55,45,97,709	175,171,829	5,45,29,991	5,665,349	+4,93,32,500	—1,018,529	8,82,51,650

INDIAN DEBT IN ENGLAND.

RETURN of all LOANS raised in *England*, under the Provisions of any Acts of Parliament, chargeable on the REVENUES of *India*, outstanding at the Commencement of the Half-year ended on the 31st March 1917.

DESCRIPTION OF LOAN.	Total Amount of Interest payable thereon during the Half-year ended 31st March 1917.	DATE OF TERMINATION OF LOAN.	Amount of Debt paid off or discharged during the Half-year ended 31st March 1917.	Amount of Debt outstanding on 31st March 1917.
	£		£	
LOANS BEARING INTEREST.				
India 3½ per cent. Stock	1,589,621	Not redeemable until 15th January 1931; but on or after that day, upon one year's previous notice having been given by the Secretary of State for India in Council ..	120,629	90,728,391
			43,569	
India 3 per cent. Stock	987,970	Not redeemable until 5th October 1948, but on or after that day, upon one year's previous notice having been given by the Secretary of State for India in Council ..	49,624	65,800,496
			14,567	
India 2½ per cent. Stock	146,125	Not redeemable until 5th October 1926, but on or after that day, upon one year's previous notice having been given by the Secretary of State for India in Council	....	11,689,987
India Bonds	26,250	One-eight part of £4,000,000 redeemable at par on the 12th October in each of the eight years from 1911 to 1918 both inclusive, the bonds to be reemed in each year being determined by lot and paid off	5,00,000	1,000,000
			3,500,000	....
India Bills	....	.....	....	1,435,650
East Indian Railway Debenture Stock 4½ per cent.	32,302	.....	....	348,666
Eastern Bengal Railway Debenture Stock 4 per cent.	6,973	.....	....	425,000
South Indian Railway Debenture Stock 4½ per cent.	9,562	.....	....	2,701,450
Great Indian Peninsula Railway Debenture Stock 4 per cent. ..	54,029	.....	4,228,389	174,129,640
LOANS NOT BEARING INTEREST.		Total Debt in England bearing Interest..	....	9,305
		5th July 1880	....	5,779
India 5 per cent. Stock	....	10th October 1888		
India 4 per cent. Stock	....	Total Debt in England not bearing Interest..	....	15,084
	2,852,832	Total Debt in England	4,228,389	174,144,724

India Debt created and issued under the East India Loans (Railways and Irrigation) Act 1910 to the 31st March 1917.

THE RUPEE DEBT.

Return of the Interest Bearing Rupee Debt of the Government of India as at the commencement of the half-year ended on the 30th September 1916.

In Thousands of Rupees.

Particulars.	Date of Issue.	Conditions of Repayment.	Amount	Total.
Railway Loans—				
Maharaja Holkar 4½ p. c.	(1870–77)	After 101 years	1,00,00	
Maharaja Scindia 4 p. c..	....	Perpetual	1,50,00	
Nawab of Rampur 4 p. c.	(1892–93)	After one year's notice to be given on or after 1st Dec. 1917.	47,00	2,97,00
Special Loans—				
Gwalior, 4 p. c. 1887 ..	....	By annual instalments of 12 lakhs.	1,22,00	1,22,00
Four p. c. Terminable Loan. (1915–16)	1st Dec. 1915	On or before 30th November 1923, but not preceding 30th November 1920. with three months' previous notice.	4,99,86	
Conversion Loan, 1916–17..	1st Oct. 1916.	On or before 1st October 1936, but not preceding 1st October 1931, with three months' previous notice.	(*a*)6,72,98	11,72,84
Three and Half per cent.				
1842–43	1st Feb. 1843		22,40,05	
1854–55	30th June 1854		34,28,62	
Do. coupon				
1865	1st May 1865		38,04,57	
Reduced, 1879.. ..	16th Jan. 1879		3,87,36	
1900–1	30th June 1900		39,90,88	
Three per cent.				
1896–97	22nd July 1896		7,74,79	1,46,26,27
		TOTAL ..		1,62,18,11

(*a*) Inclusive of Rupees 32,49 representing Loan raised through Post Offices.

DISTRIBUTION OF RUPEE DEBT.

	Calcutta.	Inland.	Madras.	Bombay.	Total India.
Railway Loans ..	....	29700	....	....	29700
Special Loan ..	....	12200	....	....	12200
4 per cent. ..	43444	26189	13262	31481	114376
3½ per cent. ..	601841	271355	83556	345984	1302726
3 per cent. ..	47095	11354	7370	8739	74558
	69 370	350798	104188	386204	1538560

	Proportion in India held by		Held in London.	Unissued.	Total as above.
	Indians.	Europeans.			
Railway Loans ..	29700	....	....	....	29700
Special Loan ..	12200	....	....	....	12200
4 per cent. ..	35325	79051	....	....	114376
3½ per cent. ..	737082	565644	82416	....	1385142
3 per cent. ..	30979	43579	2929	....	77487
	845286	688274	85345	....	1618905

STERLING DEBT.

Debt Bearing Interest.	Capital of Debt. 31st March 1915.	Capital of Debt. 31st March 1916.	Capital of Debt. 31st March 1917.	Rate %	Annual Interest payable. 31st March 1915.	Annual Interest payable. 31st March 1916.	Annual Interest payable. 31st March 1917.
	£	£	£		£	£	£
India 3½ per cent. Stock	91137350	91137350	90728381	3½	3189807	3189807	3184524
India 3 per cent. Stock	66028171	65918642	65800496	3	1980845	1977559	1976750
India 2½ per cent. Stock ..	11689987	11689987	11689987	2½	292250	292250	292250
India Bonds	2000000	1500000	1000000	..	..	..	52500
India Bills	7000000	7000000	..	..	..	..	..
East India Railway Debenture Stock.	1435650	1435650	1435650	4½	64604	64604	64604
East Bengal Ry. Debenture Stock.	348666	348666	348666	4	13946	13946	13946
South India Ry. Debenture Stock	425000	425000	425000	4½	19125	19125	19124
G. I. P. Ry. Debenture Stock ..	2701450	2701450	2701450	4	108058	108058	108058
Indian Midland Ry. Debentures	407500	..	..	3½	14263	..	..
	183173774	182156745	174129640				
Debt not bearing Interest—							
India 5 per cent. Stock ..	9305	9305	9305				
India 4 per cent. Stock ..	7279	5779	5779				
	16584	15084	15084				
Total Debt and Annual Interest thereon on 31st March 1917 ..	183190358	182171829	174144724		5682898	5665349	5711756

INDIAN RAILWAY ANNUITIES.

	31st March 1915.	31st March 1916.
	£	
East Indian Railway—		
Annuity terminating in 1953	849167	849186
Interest in lieu of deferred annuity	262000	262000
Eastern Bengal Railway Annuity terminating in 1957 ..	116831	116831
Sind, Punjab & Delhi Railway Annuity terminating in 1958.	371214	371214
G. I. P. Railway Annuity terminating in 1948	1268471	1268470
Madras and Southern Mahratta Railway Annuity terminating in 1956..	488381	488381
Total ..	3356064	3356083

THE INDIAN MINTS.

The following statement shews the details of the **silver coinage** executed for the Government of India in the two mints during 1916-17 :—

	Calcutta. Value in Rs.	Bombay. Value in Rs.	Total. Value in Rs.
Rupees	15,65,00,000	14,24,00,266	29,89,00,266
Half-Rupees	99,022	29,40,115	30,39,137
Quarter-Rupees	32,94,581	....	32,94,581
Eighth-Rupees	24,73,342	....	24,73,342
Total ..	16,23,66,945	14,53,40,381	30,77,07,326
Total for 1915-16 ..	1,04,02,141	58,00,058	1,62,02,199

Only a small fraction of the above figures represents recoinage of withdrawn and uncurrent coins, the total receipts at both mints on account of such coins amounting to Rs. 1,38,54,587 only. The bulk of the coinage was from bar and sycee silver, and from silver coins of various foreign countries.

The following table gives the details of the silver coinage executed at the Bombay Mint on behalf of Foreign Governments :—

Denomination of the coins.	Number of pieces.	Value in Rupees.	Government on whose behalf the coinage was executed.
20 piastres	1,836,257	40,07,148	Egyptian Government.
10 „	4,674,378	51,00,297	
5 „	9,354,863	51,03,395	
2 „	2,504,614	5,46,565	
20 cents	645,232	1,96,643	Straits Government.
10 „	1,200,014	1,82,839	

Coinage of subsidiary coins for the Ceylon Government consisting of 50, 25 and 10 cent pieces was commenced at the Calcutta Mint in March 1917, but was not completed during the year.

The *nickel coinage* for the British India Government, which as usual was confined to the Bombay Mint, consisted of 39,087,087 anna piece of the nominal value of Rs. 24,42,943 against 7,670,248 pieces of the nominal value of Rs. 4,79,390 coined in the previous year. Cupro-nickel coins of the denominations of 10, 5, 2 and 1 milliémes numbering 11,702,143 pieces in all were also struck on behalf of the Egyptian Government.

The *bronze coinage* which is carried out entirely at the Calcutta Mint consisted of pice, half-pice and pie-pieces of the aggregate value of Rs. 2,65,900 compared with Rs. 1,83,900 in 1915-16. In addition, 8,364,000 pieces of bronze pennies and half-pennies for the Australian Commonwealth, 4,000,000 pieces of bronze half-milliémes for Egypt and copper ½ cents and ¼ cents numbering 7,000,000 for the Straits Government were also coined during the year at the Calcutta Mint.

The Revenue and Expenditure of the two Mints (including interest on capital outlay and other *pro forma* charges) amounted to Revenue, Rs. 3,55,024 and Expenditure, Rs. 19,45,878.

The Gold and Silver Assays made during the year numbered.

	Calcutta.		*Bombay.*	
Year.	*Gold.*	*Silver.*	*Gold.*	*Silver.*
1914–15	471	10,035	3 286	4,122.

The **Indian denominations** with their British equivalents are :—

Pie	=	1/12 penny.
Pice (3 pies)	=	1 farthing.
Anna (12 pies)	=	1 penny.
Rupee (16 annas)	=	1*s.* 4*d.*

A lakh (lac) is 100,000 rupees and a crore is 100 lakhs.

The equivalents of the rupee in various currencies are approximately as follows :—

One rupee = 1·68 franc (France, Italy, Belgium, &c.).
„ = 1·36 mark (Germany).
„ = 1·6 krone (Austria-Hungary).
„ = 0·324 dollar (United States).
„ = 0·65 yen (Japan).

The denominations of currency notes in circulation are 5, 10, 9, 50, 100, 500, 1 000, and 10,000 rupees.

HISTORY OF THE COINAGE.

The Indian mints were closed to the unrestricted coinage of silver for the public from the 26th June 1893, and Act VIII of 1893, passed on that date, repealed Sections 19 to 26 of the Indian Coinage Act of 1870, which provided for the coinage at the mints for the public of gold and silver coins of the Government of India. After 1893 no Government rupees were coined until 1897, when, under arrangements made with the Native States of Bhopal and Kashmir, the currency of those States was replaced by Government rupees. The re-coinage of these rupees proceeded through the two years 1897 and 1898. In 1899 there was no coinage of rupees; but in the following year it seemed that coinage was necessary, and it was begun in February 1900, the Government purchasing the silver required, and paying for it mainly with the gold accumulated in the Paper Currency Reserve. In that and the following month a crore of rupees was coined and over 17 crores of rupees in the year ending the 31st March 1910, including the rupees issued in connection with the conversion of the currencies of Native States. From the profit accruing to Government on the coinage it was decided to constitute a separate fund called the Gold Reserve Fund as the most effective guarantee against temporary fluctuations of exchange. The whole profit was invested in sterling securities, the interest from which was added to the fund. In 1906 exchange had been practically stable for eight years, and it was decided that of the coinage profits devoted to this fund, six crores should be kept in rupees in India, instead of being invested in gold securities. The Gold Reserve Fund was then named the Gold Standard Reserve. It was ordered in 1907 that only one-half of the coinage profits should be paid into the reserve, the remainder being used for

capital expenditure on railways. The Gold Standard Reserve was called into action before the year 1907-08 was out. Exchange turned against India, and in March 1908, the Government of India offered bills on the Secretary of State up to half a million sterling, while the Secretary of State sold £1,000,000 Consols in order to meet such demands. During April to August, further sterling bills were sold for a total amount of £8,053,000. On a representation by the Government of India, the Secretary of State agreed to defer the application of coinage profits to railway construction until the sterling assets of the Gold Standard Reserve amounted to £25,000,000. On the outbreak of the war in August 1914 the Reserve was drawn upon to meet the demands for sterling remittances, and Government offer to sell £1,000,000 of Bills weekly. The extent of these rates is shown on pp. 191, 192.

Gold.

Since 1870 there has been no coinage of double mohurs in India and the last coinage of single mohurs was in the year 1891-92.

Act XXII of 1899, passed on the 15th September 1899, provided that gold coin (sovereign and half-sovereigns) shall be a legal tender in payment or on account at the rate of fifteen rupees for one sovereign.

Silver.

The weight and fineness of the silver coins are :—

—	Fine Silver. grains.	Alloy. grains.	Total. grains.
Rupee	165	15	180
Half-rupee ..	82½	7½	90
Quarter-rupee or 4-anna piece ..	41¼	3¾	45
Eighth of a rupee or 2-anna piece ..	20⅝	1⅞	22½

One rupee = 165 grains of fine silver.
One shilling = 80.4 grains of fine silver.
One rupee = shillings 2·0439.

Copper and Bronze.

Copper coinage was introduced into the Bengal Presidency by Act XVII of 1835, and into the Madras and Bombay Presidencies by Act XXII of 1844.

The weight of the copper coins struck under Act XXIII of 1870 remained the same as it was in 1835. It was as follows :—

	Grains troy.
Double pice, or half-anna	200
Pice or quarter-anna	100
Half-pice or one-eighth of an anna ..	50
Pie, being one-third of a pice or one-twelth of an anna	33⅓

The weight and dimensions of bronze coins are as follows :—

	Standard weight in grains troy.	Diameter in millimetres.
Pice	75	25·4
Half-pice	37½	21·15
Pie	25	17·45

Nickel.

The Act of 1906 also provides for the coinage of a nickel coin. It was directed that the nickel one-anna piece should thenceforth be coined at the Mint and issue. The notification also prescribed the design of the coin, which has a waved edge with twelve scollops, the greatest diameter of the coin being 21 millimetres, and its least diameter 19·8 millimetres. The desirability of issuing a half anna nickel coin was considered by the Government of India in 1909, but after consultation with Local Governments it was decided not to take action in this direction until the people had become thoroughly familiar with the present one-anna coin.

CREMATION.

Cremation as a means of disposing of the dead is commonly adopted throughout India by the Hindus, but has been little adopted among the Europeans in India. A crematorium was started some years ago in Calcutta close to the Lower Circular Road Cemetery, at a cost of Rs. 40,000. But the return for this expenditure is disappointing. Only five or six cremations take place in Calcutta each year, in spite of the fact that the fee for cremation has been fixed by the Cremation Society of Bengal at the very low figure of Rs. 30, subject to reductions in the case of poor families. The reason for this is thought to be that, when possible, Europeans go home to die, and the Native Christians and Eurasians are very largely Roman Catholics among whom a prejudice exists against this form of the disposal of the dead. In Bombay arrangements have recently been made for a small area in the Sewri Cemetery to be walled in, and for cremations to be carried on within it in the primitive style of the country, but in such a way as to preserve the ashes,

The Paper Currency.

Under Acts VI of 1839, III of 1840, and IX of 1843, the Presidency Banks of Bengal, Bombay, and Madras were authorised to issue notes payable on demand, but the issue of the notes was practically limited to the three cities of Calcutta, Bombay, and Madras. These Acts were repealed, on the 1st March 1862, by Act XIX of 1861, providing for the issue of a paper currency through a Government Department, by means of notes of the Government of India payable to bearer on demand. Since then no banks have been allowed to issue notes in India.

Act II of 1910 amended and consolidated the law on the subject. By it, a note of the value of five, ten, or fifty rupees, as well as a note of any other denominational value which the Governor General in Council may, by notification in the *Gazette of India*, so specify, was declared to be a "universal currency note," that is, legal tender throughout British India and encashable at any office of issue in British India; the then existing sub-circles of Cawnpore, Lahore, Karachi, and Calicut were abolished, and the first three of these constituted separate circles of issue in addition to Calcutta, Madras, Bombay, and Rangoon. At the same time, by a notification issued under the Act, the further issue of 20-rupee notes was discontinued. By another notification issued in 1911 under section 2 of the same Act a currency note of the denominational value of one hundred rupees was declared to be a "universal currency note."

Department of Paper Currency.

The function of this department is to issue, without any limits, promissory notes (called currency notes) of the Government of India payable to the bearer on demand, of the denominations of Rs. 5, 10, 50, 100, 500, 1,000, and 10,000, the issue being made in exchange for rupees or half rupees or for gold coin, which is legal tender, from any Paper Currency office or agency, and for gold bullion and gold coin, which is not legal tender, from circle offices on the requisition of the Comptroller General.

Supply and Issue of Currency Notes.

Currency notes are supplied by the Secretary of State through the Bank of England on an indent from the Head Commissioner. The Head Commissioner or Commissioners supply Currency Agents with all the notes required for the purposes of the Paper Currency Act. Every such note, other than a "universal" note, bears upon it the name of the place from which it is issued and every note is impressed with the signature of the Head Commissioner or of a Commissioner or Deputy Commissioner.

The officers in charge of the circles of issue are authorised to issue, from the office or offices established in their circles, currency notes in exchange for the amount thereof (1) in rupees or half-rupees or in gold coin which is legal tender under the Indian Coinage Act; or in rupees made under the Native Coinage Act, IX of 1876, and (2) on the requisition of the Comptroller General, to all treasuries, in gold coin which is not legal tender under the Coinage Act or gold bullion at the rate of one Government rupee for 7·53344 grains troy of fine gold. Currency notes can also be issued against gold coin of bullion or silver bullion or sterling securities held by the Secretary of State for India in Council.

Notes when legal tender.

Every note is a legal tender in its own circle (except by Government at the office of issue) for the amount expressed in that note; that is to say, whenever a note forms the integral sum or a portion of any payment, either to Government on account of a revenue or other claim, or to any body corporate or person in British India, it is a legal tender. Five, ten, fifty and hundred rupee notes are legal tender throughout British India.

Notes of higher denominations than five, ten, fifty and hundred rupees are payable only at the office or offices of issue of the town from which they have been issued. In ordinary circumstances every Government treasury, of which there are about 250 in British India, cashes or exchanges notes if it can do so without inconvenience; and when this cannot be done conveniently for large sums, small sums can generally be exchanged for travellers.

Reserve.

The whole amount of currency notes in circulation is secured by a reserve of gold and silver coin or bullion and securities of the Government of India or of the United Kingdom. The total amount of such securities is limited to 140 millions of rupees, of which not more than 40 millions of rupees may be in sterling securities. Under the Act of 1882 the maximum limit of the securities was fixed at sixty millions of rupees; but, the issues having largely expanded, the Government of India was empowered by Act XV of 1890 to raise the limit to eighty millions. The power was utilised to raise the invested reserve to seventy millions on the 19th December 1890, and to eighty millions a year later, on the 3rd December 1891. By notification No. 5366 of the 18th December 1896, the invested reserve was raised to one hundred million, the power to do so having been given by Act XXI of 1896. Act III of 1905 raised the limit to 120 millions and in August of that year 20 millions of the reserve were invested by the Secretary of State in consols and exchequer bonds. In 1908-09 the exchequer bonds were replaced by Consols. By Act VII of 1911 the limit was raised further to 140 millions, and in April of that year 20 millions were invested by the Secretary of State in Consols.

War Measures.

The permanent policy in regard to the invested portion of the Paper Currency Reserve has been left for future consideration, the war having followed too closely upon the report of the Currency Commission to warrant definite steps being taken now. Meantime steps have been taken to increase the maximum investments. As the result of difficulties which arose in 1914-15 in connection with the financing of the cotton crop, Government had to arrange to provide themselves with funds to support trade in general through the Presidency Banks. Power was taken at the beginning of 1915 to

increase the permissible investments in India on behalf of the Paper Currency Reserve by £4 millions. During the latter part of the official year 1915-16 there was a brisk demand for Council Bills, which could not be met from the treasury balances, owing to the large disbursements made in India on behalf of the Home Government. It therefore became desirable that Government should have the power of making this additional investment of £4 millions in London and they took the necessary power by Ordinance in January 1916. Towards the close of the year this Ordinance was replaced by a temporary Act (IX of 1916) which also authorised Government to make a yet further increase of £4 millions in the investment. Against the total power of £8 millions thus obtained investments of £4 millions were actually made in the financial year, being all in the form of Treasury Bills.

The composition of the Currency Reserve held against the note circulation at the close of March 1917 was Currency Reserve Rs. 37,88,32,594 and Securities Rs. 48,49,00,000.

Larger Investments.

It has already been explained that by Act IX of 1916 the Government of India took power to issue currency notes up to a maximum amount of six crores against British Treasury Bills of an equivalent value held by the Secretary of State. The reason for this was that when the Secretary of State in order to meet a strong trade demand for Council Bills sells bills in excess of his own requirements or the convenience of the Government of India he can in normal conditions fall back upon the alternative of selling his bills against the Paper Currency Reserve, instead of against the Government of India's treasury balances. The payments made to him for the bills in London are then credited to the Paper Currency Reserve there in gold and the bills are paid from the funds held on account of this reserve in India. This process involves the ear-marking of such gold and in the financial situation created by the war the course was undesirable. For this reason it was decided to take a power to invest such funds in British treasury bills.

By a notification issued on November 13 the Government of India took power to increase such investments by an additional 12 crores of rupees; and on December 19 a further Rs. 12 crores. It was pointed out that in spite of the assistance rendered by the heavy coinage of rupees undertaken in 1916 the Government of India were undertaking on behalf of the Home Government such heavy expenditure in this country that their balances would not be adequate to meet the trade demands for Council Bills. These additional powers were therefore taken in the hope that together with the assistance which might be anticipated from treasury balances later on in the year they will suffice to cover the sales of Council Bills during the remainder of the busy season. A promise was however given that in the event of this measure proving inadequate the Government would take such other steps which might be necessary for the purpose of enabling trade to bring out to India the funds required for trade purposes (*q. v.* India and the War-Finance).

Currency Chest.

Under the Gold Note Acts of 1898 and 1900, the Government of India had obtained authority to hold a part of the metallic portion of the reserve in gold coin (or temporarily in silver bullion) in London instead of in India. The object of these enactments was merely to afford temporary relief to the Indian money market in seasons of stress. A certain amount of gold had in this way been held in London during 1899 and 1900, but not to any large extent, and the occasion for doing so ceased, except in regard to gold in transit, from the middle of 1900. Act II of 1910, however, gives full power to hold the metallic portion of the reserve or any part of it, either in London or in India or partly in both places, and also in gold coin or bullion or in rupees or silver bullion, at the free discretion of Government subject only to the exception that rupees should be kept only in India and not in London. A currency chest was accordingly opened in London and a sum of £6,000,000 was remitted from India in pursuance of this policy, and a further sum of £1,045,000 was transferred to the chest from the Secretary of State's balances during the course of 1905-06. On the 31st March 1917 the London currency chest held £ 4,446,666 on behalf of the Currency Reserve.

Metallic Reserve.

The metallic reserve may consist of sovereigns, half sovereigns, rupees, and half rupees, and gold and silver bullion, the last named being valued at the sum spent on the purchase of such bullion. No gold was contained in the reserve between March 1876 and February 1898, and the quantity increased very slowly until February 1899, but from that date it rose rapidly till the end of March 1900 when it amounted to £7,500,012. Government then took measures to reduce what was considered to be an inconveniently large gold reserve, and at the end of March 1901 the value of the gold reserve had fallen to £5,778,518. In the next three years it again increased continuously from £7,023,921 at the end of 1901-02 to £9,859,564 at the end of 1902-03 and £10,789,561 at the end of 1903-04. During the next three years it remained practically steady, the amount held on the 31st March 1907 being £10,688,841. In 1907-08 the serious monetary crisis in America and the contraction in the exports from India owing to the famine led to a very large increase in the demand for gold at the Currency offices with the result that on the 31st March 1908 the value of the gold reserve had fallen to £6,417,841 inclusive of £3,705,000 held in England. Adverse trade conditions continued in 1908-09 and on the 31st March 1909 the gold reserve had dwindled down to £1,523,414, of which £1,500,000 was held in England. Normal conditions returned in 1909-10 and the stock of gold in the reserve rose to £8,701,716 on 31st March 1910.

On March 31st, 1917, the Paper Currency Reserve was held in the following form: Silver coins in India, Rs. 1,708 lakhs. Gold coin and bullion in India, 1,200 lakhs. Silver bullion under coinage, 200 lakhs. Gold coin and Bullion in England, 667 lakhs, Silver bullion in England, 13 lakhs, Securities, 4,849 lakhs. (In Rupee Securities 1,020 lakhs, in sterling securities 26·6 million pounds).

Effect of the War.

It was explained in earlier editions of the "Indian Year Book" that the outbreak of the war found the Government of India in such a strong position that it was equal to meeting with ease all the demands upon it. The second year of the war reinforced this contention. After the first shock of crisis credit and confidence rapidly returned. Although trade was hampered by various restrictions it showed great elasticity in adapting itself to the abnormal conditions prevailing. This is nowhere more marked than in the increase in the note circulation. During the year 1914-15 the active circulation, which had been steadily developing, showed a set-back. This was due as much to the slackness of trade and to the falling off in the demand for currency as to any decline of confidence in the note issue. Indeed some improvement in the active circulation was noticed towards the close of the year when this circulation stood at Rs. 44 crores. This movement continued throughout 1915-16, and was specially marked during 1916-17. The note issue consequently soon assumed unprecedented proportions and stood at Rs. 86 crores at the end of March 1917.

Of recent years steps have been taken to increase the popularity of the Note issue. The first important measure was the universalisation of Notes up to Rs. 100, instead of confining the facilities for encashment to the circle of issue. In 1914-15 two other important steps were taken. It was decided not to re-issue Notes, and so to eliminate the worn and filthy paper that was sometimes found in circulation. Orders were also passed that Government Treasuries should freely exchange Notes for coins and *vice versa* up to the limit of their power. The introduction of an improved form of Note is under consideration. The Presidency Banks have also made arrangements for the free issue and encashment of universal notes, at many of their important branches at which Government Treasury business is conducted. One rupee notes were issued in December 1917. At the close of the financial year, that is to say, March 31st, 1917, the actual state of the Paper Currency was as follows:—

	31st March 1917.
	Rs. Lakhs. Rs.
Total Circulation	86,37
Silver coin in India	17,08
Gold Coin and bullion in India	12,00
Silver bullion under coinage	2,00
Gold coin and bullion in England	6,67
Silver bullion in England	13
Securities held in India	10,20
Sterling securities	26,61,438
Total Reserve	86,37

It was the policy of the Government of India to give gold from the Paper Currency Reserve freely on demand. But when the war broke out, it became apparent that gold was being withdrawn from the Reserve not to meet legitimate demands, but to speculate: sovereigns were at a premium in the bazaar, and those who commanded funds took sovereigns from the Paper Currency Reserve and sold them at a profit. Government accordingly declined to issue sovereigns in sums smaller than ten thousand pounds at a time, but as the speculators then clubbed together and formed syndicates to withdraw sovereigns, an absolute embargo was placed on the issue of gold. The effect of these withdrawals, of the abolition of the Silver Branch of the Gold Standard Reserve, and of the transfer of gold from the Paper Currency Reserve to the Gold Standard Reserve in payment of Reverse Councils is seen in the last official statement showing the composition of the Paper Currency Reserve:—

	th of December 1917.
	Rs.
Total Circulation	1,11,92,08,300
Silver Coin in India	22,34,67,597
Gold Coin and Bullion in India.	25,27,54,730
Silver bullion under Coinage	53,31,157
Gold Coin and Bullion in England	1,42,50,000
Gold Coin and Bullion in His Majesty's Dominions	35,33,353
Gold Coin and Bullion in Transit	52,77,000
Securities held in India	9,99,99,946
Securities held in England	51,47,94,607
Total Reserve	1,11,92,08,300

Interest.

The interest accruing on the invested reserve is entered in a separate account, and paid to the credit of the Government of India, under the head "Profits of note circulation."

The interest on the invested reserve amounted in 1916-17 to Rs. 94,57,000; the expenditure of the Department being Rs. 25,44,082 and the profit Rs. 70,70,574.

Circulation.

The value of currency notes in circulation throughout India in 1916-17 and previous years:—

1897-98 to 1901-02	27,34,93,893
1902-03 to 1906-07	39,20,11,782
1907-08 to 1911-12	50,64,18,668
1912-13	65,62,08,012
1913-14	65,55,07,240
1914-15	64,04,01,769
1915-16	64,09,50,374
1916-17	76,14,16,581

The gross circulation of each denominations of note on March 31st 1917 was as follows:—

	1917. Rs.
5-rupee	6,624,239
10 ,,	22,598,076
20 ,,	21,659
50 ,,	504,130
100 ,,	2,532,181
500 ,,	48,944
1,000 ,,	112,420
10,000 ,,	18,890
Total pieces	32,460,539
Value	86,37,51,735

The Gold Standard Reserve.

The Gold Reserve Fund was first started in the beginning of 1901 when the profits which had accrued from the coinage of rupees from April 1900 amounting to £3 millions were credited to the fund, gradually remitted to England from time to time and there invested in sterling securities. In the following years the demand for rupees for trade requirements necessitated further heavy coinage and the investments held in the Gold Reserve Fund rapidly swelled by the credit of the profits and the interest thereon and amounted at the close of 1905-06 to £12¼ millions. During the latter half of this year, abnormal trade activity resulted in an unprecedented demand for silver currency and necessitated exceptionally heavy coinage in a short space of time. To avoid the possibility of a recurrence of similar inconvenience, a separate silver branch of the Gold Reserve Fund was formed and was brought up to its proposed limit of rupees 6 crores (£4 millions) by March 1907; and after being for a short time known as the "Gold and Silver Reserve Fund" it was finally named the Gold Standard Reserve. At the close of 1906-07, the Reserve contained nearly £17 millions, of which £12¼ millions were held in securities, £4 millions in rupees in India and the rest in gold in India and as a book credit. It is not necessary in this report to recount the events of the latter half of 1907-08. It will be sufficient to mention that the sale in India during the first half of 1908-09 of sterling bills on London resulted in the withdrawal from circulation in India of some Rs. 12 crores, the equivalent being withdrawn in gold by the Secretary of State from the Reserve in London, securities to the value of over £8 millions being put on the market. By November 1908, the silver in the Reserve in India had reached 18·65 crores. The subsequent improvement in trade conditions necessitated a portion of this silver being transferred to the Paper Currency Department to meet rotes and frequent similar transfers continued to be made, the account being adjusted by a transfer in the opposite direction in London, made in gold from the Currency Reserve held there to the Gold Standard Reserve. By March 1911, the silver branch in India contained only 2·90 crores and the balance remained at this figure till September 1912, when the resumption of coinage made it possible gradually to increase it up to Rs. 6 crores, of which 4½ were held in Bombay.

Effects of the War.—The recommendations of the Currency Commission regarding the policy to be pursued towards the Gold Standard Reserve will be found explained in detail in the section Currency Commission (q. v.). Briefly, they were that the silver branch of the Reserve should be abolished, and the rupees in the Reserve transferred to the Paper Currency Reserve in exchange for an equivalent in gold; that a much larger gold holding, in liquid gold, should be aimed at; and that the Secretary of State should be prepared to sell sterling bills and telegraphic transfers on London, or Reverse Councils as they are sometimes called, on demand. Unfortunately the war broke out before there was time for this policy to be carried into effect so the emergency found the Reserve in a transition stage. The measures adopted were prompt and efficacious. The silver branch of the Reserve was abolished by transferring the rupees therein to the Paper Currency Reserve in exchange for an equivalent in sovereigns, so that the Reserve was composed entirely of gold and gold securities. After a brief interval, necessary to consult, the Secretary of State, who naturally had to colour his arrangements by the abnormal financial conditions prevailing in London, a notification was issued early in August 1914 to the effect that Government would be prepared to sell sterling bills and telegraphic transfers on London to the extent of a million sterling a week, at the following rates:—Bills 1-3-29 32d. and telegraphic transfers 1-3-27 32d. This at once steadied the exchanges, which whilst they have been sluggish, have not fallen below gold point. The appended tables will show the composition of the Gold Standard Reserve brought about by this policy, and the extent of the demand for sterling bills:—

Strength of the Reserve.—Details of the balance of the Gold Standard Reserve on the 31st March 1917:—

	£
In England—	
Estimated value on the 31st March 1917 of the Sterling Securities of the nominal value of £26,320,337 (as per details below)	25,405,570
Cash placed by the Secretary of State in Council at short notice	6,001,456
In India—	
Gold	103,000
TOTAL ..	31,510,026

	Face Value. £
Details of investments—	
Local Loans 3 per cent. Stock ..	200,000
Guaranteed 2¾ per cent. Stock ..	438,720
Transvaal Government 3 per cent. Guaranteed Stock (1923-53) ..	1,092,023
Exchequer 6 per cent. Bonds ..	4,134 500
Exchequer 3 per cent. Bonds ..	2,875,000
Canada 3½ per cent. Bonds ..	161,000
New South Wales, 3½ per cent. Stock	113,000
British Treasury Bills	13,732,000
National War Loan 4½ per cent. Stock	3,574,094
TOTAL ..	26,320,337

The balance of the Gold Standard Reserve on the 30th November 1917, in India and in England, amounted to £33,623,242 and was held in the following form :—

	£
(1) Cash placed by the Secretary of State for India in Council at short notice	6,000,521
(2) British and Colonial Government securities (value as on 30th September 1917)	21,965,653.
(3) British Government securities since purchased ..	5,657,068
Total ..	33,623,242

Causes of the changes.

The increase in the Reserve is explained by a financial communique which was published in September 1916. In order to meet the conditions set up by the outbreak of the war, Government in 1914 entered into substantial borrowing. It issued £7 millions of sterling Bills in London and it took a loan of £8 millions from the Gold Standard Reserve in India. As matters improved, these temporary commitments were reduced. Of the total loan from the Gold Standard Reserve £4 millions were repaid, and provision was made for the discharge of £1½ millions of the sterling Bills in London. Under the loan programme for 1916-17 the Government of India required to borrow Rs. 6 crores for their current requirements in India. In order to provide what practically amounted to unlimited conversion of rights of holders of 3 per cent. and 3½ per cent. Government Paper in India, they offered to receive Rs. 12 crores, carrying an equivalent conversion right, and if this had been taken up the proceeds would have been used to discharge the balance of the loan from the Gold Standard Reserve. But owing to the competition of British Exchequer Bills, a little less than Rs. 7 crores was subscribed to the Conversion Loan in India. Consequently there were not available the funds with which to discharge the balance of the loan to the Gold Standard Reserve. The course of the exchanges however rendered this a matter of no urgency. The Reserve is primarily intended to maintain the sterling value of the rupee, by providing a gold reservoir from which to meet any demand for sterling exchange in the event of the balance of trade turning against India. Owing to the heavy expenditure on behalf of the Home Government in India, the magnitude of the demand for Indian produce, and the falling off in the exports from Great Britain to India in consequence of the reduction of production and the scarcity of freight, the balance of trade has been heavily in favour of India; the problem therefore has been to finance the rupee exchange and not to prepare for a further demand for sterling exchange. In order to lighten the pressure on the London Money Market, the Government decided to discharge the whole of their floating debt in England. To do this they took a further loan from the Gold Standard Exchange of £4 millions, raising their borrowings again to £8 millions. The actual additions to the volume of the Reserve arose from the fact that the demand for currency, consequent in part of the disappearance of gold as a circulating medium owing to the appreciation of the sovereign, necessitated a heavy coinage of rupees. The profits on this, according to practice, were devoted to the Gold Standard Reserve.

Sterling Bills.—The following table shows the details of the weekly allotments since the reverse remittances were first offered :—

Date.	Offered.	Tendered.	Allotted.
	£	£	£
August 6, 1914	1,000,000	1,091,000	1,000,000
„ 13, 1914	1,000,000	813,000	813,000
„ 20, 1914..	1,000,000	632,000	632,000
„ 27, 1914..	1,000,000	538,000	538,000
September 3, 1914..	1,000,000	474,000	474,000
„ 10, 1914..	1,000,000	360,000	360,000
„ 17, 1914..	1,000,000	335,000	335,000
„ 24, 1914..	1,000,000	346,000	346,000
October 1, 1914..	1,000,000	355,000	355,000
„ 8, 1914..	1,000,000	345,000	345,000
„ 15, 1914..	1,000,000	601,000	601,000
„ 22 1914..	1,000,000	427,000	427,000
„ 29, 1914..	1,000,000	177,000	177,000
November 5, 1914..	1,000,000	....	....
„ 12 1914..	1,000,000	94,000	94,000
„ 19, 1914..	1,000,000	390,000	390,000
„ 26, 1914..	1,000,000	560 000	560 000
December 3, 1914..	1,000,000	255,000	255,000
„ 10, 1914..	1,000,000	371,000	371,000
„ 17, 1914..	1,000,000	404,000	404,000
„ 23, 1914..	1,000,000	170,000	170,000
„ 30, 1914..	1,000,000	50,000	50,000

Sterling Bills.—The following table shows the details of the weekly allotments since the reverse remittances were first offered—*continued.*

Date.	Offered.	Tendered.	Allotted.
	£	£	£
January 7, 1915	1,000,000	100,000	100,000
„ 14, 1915	1,000,000	75,000	75,000
„ 21, 1915	1,000,000	....	....
„ 28, 1915	1,000,000	50,000	50,000
February 4, 1915	1,000,000	....	....
„ 11, 1915	1,000,000	....	....
„ 18, 1915	1,000,000	....	....
„ 25, 1915	1,000,000	....	....
March 4, 1915	1,000,000	....	....
„ 11, 1915	1,000,000	....	....
„ 18, 1915	1,000,000	....	....
„ 25, 1915	1,000,000	....	....
April 1, 1915	1,000,000	....	....
„ 8, 1915	1,000,000	....	....
„ 22, 1915	1,000,000	....	....
„ 29, 1915	1,000,000	....	....
May 6, 1915	1,000,000	....	....
„ 13, 1915	1,000,000	....	....
„ 20, 1915	1,000,000	....	....
„ 27, 1915	1,000,000	....	....
June 2, 1915	1,000,000	100,000	100,000
„ 10, 1915	1,000,000	206,000	206,000
„ 17, 1915	1,000,000	190,000	190,000
„ 24, 1915	1,000,000	155,000	155,000
July 2, 1915	1,000,000	160,000	160,000
„ 9, 1915	1,000,000	1,075,000	1,000,000
„ 16, 1915	1,000,000	524,000	524,000
„ 23, 1915	1,000,000	850,000	850,000
„ 30, 1915	1,000,000	843,000	843,000
August 6, 1915	1,000,000	455,000	455,000
„ 12, 1915	1,000,000	345,000	345,000
„ 20, 1915	1,000,000	15,000	15,000
September 3, 1915	1,000,000	....	....
„ 13, 1915	1,000,000	50,000	50,000
„ 24, 1915	1,000,000	....	....
October 1, 1915	1,000,000	....	....
„ 7, 1915	1,000,000	....	....

GROSS REVENUE IN INDIA AND ENGLAND; IN £ (15 RUPEES=£1).

HEADS OF REVENUE.	1909–10.	1910–11.	1911–12.	1912–13.	1913–14.	1914–15.	1915–16.	1916–17 (Revised Estimate).
PRINCIPAL HEADS OF REVENUE:	£	£	£	£	£	£	£	£
Land Revenue	21,332,141	20,877,521	20,764,697	21,282,468	21,391,575	21,221,539	22,031,161	22,063,500
Opium	5,534,683	7,521,962	5,961,278	5,124,592	1,624,878	1,572,218	1,913,514	3,153,100
Salt	3,319,518	3,175,950	3,391,212	3,334,374	3,445,305	3,910,790	3,647,587	4,735,900
Stamps	4,548,304	4,811,691	4,815,129	5,069,115	5,318,293	5,082,043	5,433,632	2,820,900
Excise	6,537,854	7,030,314	7,609,753	8,277,919	8,894,300	8,856,881	8,632,209	9,152,500
Provincial Rates	539,223	554,378	548,680	552,149	180,210	38,814	41,845	30,500
Customs	4,965,118	6,619,009	6,468,567	7,197,243	7,558,220	6,347,201	5,873,886	8,669,100
Assessed Taxes	1,558,964	1,593,301	1,652,878	1,742,397	1,930,250	2,036,733	2,090,109	3,568,100
Forest	1,735,386	1,829,557	1,952,179	2,153,009	2,229,872	1,980,652	2,074,128	2,294,900
Registration	430,377	425,855	445,862	482,022	518,962	485,295	518,879	541,900
Tributes from Native States	588,307	607,447	595,005	622,542	616,881	609,827	609,128	604,100
TOTAL	51,089,875	55,046,985	54,205,240	55,838,830	53,728,746	52,141,993	52,866,375	60,684,500
INTEREST	1,184,343	1,465,439	1,448,741	1,473,708	1,352,119	1,023,307	1,096,417	1,110,100
POST OFFICE	1,927,229	1,996,922	2,134,279	2,262,436	2,410,210	(c) 3,596,973	(a) 3,787,478	(c) 4,176,700
TELEGRAPH	902,851	997,159	1,087,425	1,174,124	1,188,309			
MINT	125,953	196,110	367,100	487,359	339,841	69,498	101,918	624,600
RECEIPTS BY CIVIL DEPARTMENTS:								
Law and Justice:								
Courts of Law	293,339	310,663	323,660	352,051	373,791	404,568	413,545	415,600
Jails	230,155	237,791	253,354	270,062	288,448	296,534	290,225	332,800
Police	148,950	155,373	122,738	135,553	130,339	141,281	143,199	153,800
Ports and Pilotage	140,083	146,531	151,737	156,746	153,609	140,330	125,394	119,700
Education	165,875	183,636	205,610	226,126	247,905	266,250	295,036	299,300
Medical	58,235	63,697	66,847	82,505	80,388	84,768	91,327	110,100
Scientific and other Minor Departments	109,438	113,432	114,185	111,804	133,806	(a) 163,217 (b) 108,173	(a) 78,465 (b) 133,713	(a) 87,600 (b) 175,500
TOTAL	1,146,075	1,211,123	1,238,131	1,334,847	1,408,286	1,505,120	1,579,904	1,694,400
MISCELLANEOUS RECEIPTS:								
Receipts in aid of Superannuation, &c.	192,086	195,489	201,470	200,386	206,810	213,235	213,927	218,600
Stationery and Printing	95,324	97,656	96,891	92,078	93,416	97,594	89,134	93,100
Exchange	44,481	70,084	105,697	100,879	119,741	1,729	74,254	146,700
Miscellaneous	373,997	314,662	409,018	371,864	352,612	365,192	302,173	349,100
TOTAL	705,888	677,891	813,076	765,207	772,579	677,750	679,488	806,500

(a) Agriculture. (b) Scientific and Miscellaneous Departments. (c) Posts and Telegraphs.

GROSS REVENUE IN INDIA AND ENGLAND; IN £ (15 RUPEES=£1)—(*contd.*)

HEADS OF REVENUE.	1909–10.	1910–11.	1911–12.	1912–13.	1913–14.	1914–15.	1915–16.	1916–17 (Revised Estimate).
	£	£	£	£	£	£	£	£
RAILWAYS:								
State Railways (Gross Receipts)	28,923,931	30,629,756	33,579,129	36,686,364	37,546,135	36,105,167	38,176,193	41,681,500
Deduct—								
Working Expenses and Surplus Profits paid to Companies.	16,536,801	16,787,641	17,745,049	19,391,729	20,013,602	20,376,709	20,290,504	20,798,800
Net Receipts	12,387,130	13,842,115	15,834,080	17,294,635	17,532,533	15,728,458	17,885,689	20,882,700
Guaranteed Companies (Net Traffic Receipts) ..	—48	..	..	3,980	..	..	..	..
Subsidized Companies (Government share of Surplus Profits and Repayment of Advances of Interest).	58,296	39,346	57,645	73,174	93,101	70,691	91,414	98,900
TOTAL	12,445,378	13,881,461	15,891,725	17,371,789	17,625,634	15,799,149	17,977,103	20,981,600
IRRIGATION:								
Major Works:								
Direct Receipts	2,307,077	2,288,051	2,381,533	2,607,478	2,765,966	2,758,490	2,737,991	2,920,500
Portion of Land Revenue due to Irrigation ..	1,117,388	1,178,005	1,351,465	1,538,245	1,684,374	1,667,864	1,773,720	1,755,600
Minor Works and Navigation	235,691	228,465	247,054	265,494	262,819	254,615	267,368	303,400
TOTAL	3,660,156	3,694,521	3,980,052	4,411,217	4,713,159	4,680,969	4,779,079	4,979,500
OTHER CIVIL PUBLIC WORKS	268,786	293,833	326,924	355,447	298,640	288,219	304,035	306,800
RECEIPTS BY MILITARY DEPARTMENT:								
Army:								
Effective	875,557	948,154	1,061,030	1,107,244	1,080,631	971,846	816,434	897,500
Non-effective	102,171	110,495	118,336	120,559	122,875	124,345	123,509	122,400
	977,728	1,058,649	1,179,366	1,227,803	1,203,506	1,096,191	939,943	1,019,900
Marine	83,460	91,787	84,900	87,669	89,542	198,115	223,263	373,200
Military Works	75,773	70,593	78,791	72,162	76,604	80,382	78,534	76,700
TOTAL	1,136,961	1,221,029	1,343,057	1,387,634	1,369,652	1,374,688	1,241,740	1,469,800
TOTAL REVENUE	74,593,495	80,682,473	82,835,750	86,862,598	85,207,175	81,157,666	84,413,537	96,834,500

The Currency Commission.

The Royal Commission on Indian Currency and Finance was appointed in April 1913, in order to inquire into certain questions arising out of the management of the Indian currency system and the control of Indian finance. For some years, and particularly since the American crisis of 1907, when the Indian currency system was severely tried, much criticism had been levelled against the manner in which the principles laid down by the Fowler Committee of 1898 had been developed, and against the extent to which Indian funds and reserves had been drawn to London. These criticisms were brought to a head when strong complaint was made in Parliament of the agency through which large purchases of silver were made for the Government of India in 1912.

It was to settle these issues that the Commission was appointed, and it took evidence throughout the latter part of the year 1913.

The Report.—The report was dated February 24th, 1914, some delay occurring through the necessity of referring it to Sir Henry Chalmers, who had taken up his post as Governor of Ceylon, and Sir Shapurji Broacha, who had been obliged to return to Bombay on account of the severe financial crisis consequent on the failure of certain of the swadeshi banks. The report was long and detailed, so the Commission furnished a summary of it, which condensed their opinions and recommendations in the following passages:—

1. The establishment of the exchange value of the rupee on a stable basis has been and is of the first importance to India.

2. The measures adopted for the maintenance of the exchange value of the rupee have been necessarily and rightly rather supplementary to, than in all respects directly in pursuance of, the recommendations of the Committee of 1898.

3. These measures worked well in the crisis of 1907-08, the only occasion upon which they have been severely tested hitherto.

4. The time has now arrived for a reconsideration of the ultimate goal of the Indian Currency system. The belief of the Committee of 1898 was that a Gold Currency in active circulation is an essential condition of the maintenance of the Gold Standard in India, but the history of the last 15 years shows that the Gold Standard has been firmly secured without this condition.

5. It would not be to India's advantage to encourage an increased use of gold in the internal circulation.

6. The people of India neither desire nor need any considerable amount of gold for circulation as currency, and the currency most generally suitable for the internal needs of India consists of rupees and notes.

7. A mint for the coinage of gold is not needed for purposes of currency or exchange, but if Indian sentiment genuinely demands it and the Government of India are prepared to incur the expense, there is no objection in principle to its establishment either from the Indian or from the Imperial standpoint: provided that the coin minted is the sovereign (or the half-sovereign); and it is pre-eminently a question in which Indian sentiment should prevail.

8. If a mint for the coinage of gold is not established, refined gold should be received at the Bombay Mint in exchange for currency.

9 The Government should continue to aim at giving the people the form of currency which they demand, whether rupees, notes or gold, but the use of notes should be encouraged.

10 The essential point is that this internal currency should be supported for exchange purposes by a thoroughly adequate reserve of gold and sterling.

11. No limit can at present be fixed to the amount up to which the Gold Standard Reserve should be accumulated.

12. The profits on coinage of rupees should for the present continue to be credited exclusively to the Reserve.

13. A much larger proportion of the Reserve should be held in actual gold. By an exchange of assets between this Reserve and the Paper Currency Reserve, a total of about £10,000,000 in gold can be at once secured. This total should be raised as opportunity offers to £15,000,000 and thereafter the authorities should aim at keeping one-half of the total Reserve in actual gold.

14. The Indian branch of the Gold Standard Reserve in which rupees are now held should be abolished, the rupees being handed over to the Paper Currency Reserve in exchange for gold.

15. The proper place for the location of the whole of the Gold Standard Reserve is London.

16. The Government should definitely undertake to sell bills in India on London at the rate of 1*s.* 3 29-32*d.* per rupee whenever called upon to do so.

17. The Paper Currency system of India should be made more elastic. The fiduciary portion of the note issue should be increased at once from 14 crores to 20 crores, and thereafter fixed at a maximum of the amount of notes held by Government in the Reserve Treasuries plus one-third of the net circulation, and the Government should take power to make temporary investments or loans from the fiduciary portion within this maximum in India and in London, as an alternative to investment in permanent securities.

18. We recommend the immediate universalisation of the 500 rupee note and the increase of the facilities for the encashment of notes.

19. The aggregate balances in India and London in recent years have been unusually large. This has been due mainly, though not entirely, to accidental causes and to the exceptional prosperity of India.

20. Caution is justifiable in framing Budgets in India, but has been carried rather further than was necessary in recent years.

21. A change in the date of the commencement of the financial year from the 1st April to the 1st November or the 1st January would probably enable the Government of India to frame more accurate Budgets. Such a change would also enable the India Office to fix the amount of their borrowings in London with closer regard to immediate needs. We commend this proposal for favourable consideration.

22. The practice of transferring revenue surpluses to London to be used in avoiding or reducing fresh borrowings for capital expenditure has been thoroughly justified in the interest of India, and the Secretary of State has made good use, for this purpose or for actual reduction of debt, of the balances from time to time accumulated in his hands.

23. But the recommendations which we make as regards loans by Government in India may lead to a revision of the occasions, though not of the extent, of transfers of money to London.

24. The independent Treasury system of the Indian Government is not an ideal one. It is partly responsible for the stringency which recurs annually in the Indian money markets.

25. We recommend that the Government of India should make a regular practice of granting loans to the Presidency Banks from their surplus balances in India against security on terms to be negotiated with the Presidency Banks.

26. In deciding upon the location of surplus balances, the Government of India and the Secretary of State should act in consultation, and, while the transmission of the necessary funds to London at favourable rates of exchange is the first consideration, the authority should have regard to all the factors including the possibility of utilising surplus balances for loans in India.

27. In carrying out these recommendations, the authorities should proceed tentatively and with caution.

28. We recommend that the amount of the annual rupee loans in India should be increased as much as possible. The figures of recent loans appear to have been somewhat over cautious. We call attention to the questions of relaxing present regulations in regard to endorsements on rupee paper and of creating new forms of securities.

29. The Secretary of State sells Council Drafts, not for the convenience of trade, but to provide the funds needed in London to meet the requirements of the Secretary of State on India's behalf.

30. The India Office perhaps sold Council Drafts unnecessarily at very low rates on occasions when the London balance was in no need of replenishment, but we do not recommend any restrictions upon the absolute discretion of the Secretary of State as to the amount of drafts sold or the rate at which they are sold, provided that it is within the gold points. The amount and occasion of sales should be fixed with reference to the urgency of the Government's requirements and the rate of exchange obtainable, whether the drafts are against Treasury balances or against the Reserves.

31. There has been some excess of caution in the renewal of debt by the India Office during recent years.

32. The system of placing portions of the India Office balance out on short loan with approved borrowers in the city of London is on the whole well managed, but we draw attention to—

(*a*) The term for which loans are made.

(*b*) The desirability of giving greater publicity to the methods by which admission is gained to the list of approved borrowers.

(*c*) Some defects in the list of approved securities and especially its narrow range.

33. There is no ground for the suggestion that the City members of the Secretary of State's Council showed any kind of favouritism in placing on deposit with certain banks, with the directorates of which they were connected, a part of the India Office balance at a time when it was too large to be placed entirely with the approved borrowers. But we call the attention of the Secretary of State to the desirability of avoiding as far as possible all occasion for such criticism, though it may be founded on prejudice and ignorance of the facts.

34. We observe that in our opinion the time has come for a general review of the relations of the India Office to the Bank of England.

35. The working of the present arrangements for the remuneration of the Secretary of State's broker should be watched, and if necessary they should be revised.

36. We record our high opinion of the way in which the permanent staff, both in India and in London, have performed the complicated and difficult financial duties placed upon them.

37. We recommend a continuance of a Finance Committee of Council as providing the machinery most suitable for the work required.

38. The Finance Committee should, if possible, contain three members with financial experience, representing—

(*a*) Indian Official Finance.

(*b*) Indian Banking and Commerce.

(*c*) The London Money Market.

In any case there should be at least one member with Indian financial experience. The absence of any representative of Indian finance on the Committee since 1911 has resulted in giving undue prominence to the representation of London City experience.

39. While we suggest that the changes recently proposed and now under discussion in the constitution of the India Council may require some modification in order to provide for the continuance of a Finance Committee of Council, we are in sympathy with the desire for expediting financial business, which is one of the objects in view.

40. The present arrangement under which the Assistant Under Secretary of State, having financial experience, is able to share with the Financial Secretary the responsibility for financial business in the India Office has many advantages For the future we recommend that either (1). the Under Secretary or Assistant Under Secretary of State should have financial experience as at present, or (2) there should be two Assistant Under Secretaries, of whom one should have financial experience.

41. We are not in a position to report either for or against the establishment of a State or Central Bank, but we regard the subject as one which deserves early and careful consideration, and suggests the appointment of a small expert committee to examine the whole question in India, and either to pronounce against the proposal or to work out in full detail a concrete scheme capable of immediate adoption.

A Note of Dissent.—The report was signed by Sir James Begbie subject to a note of dissent. In this he pointed out that the currency policy directed to the attainment of stability in the exchange value of the rupee by means of gold reserves collected from the profits realised on the coinage of rupees had brought into existence an extensive token currency, which was not a desirable form of currency for a country which absorbs gold on a very large scale. Sir James Begbie therefore held the view.

"That the true line of advance for the currency policy is to discourage an extension of the token currency by providing increased facilities for the distribution of gold when further increases in the currency become necessary. These greater facilities should, I consider, include the issue of gold coins from an Indian mint of a value more suitable for general currency use than the sovereign and half-sovereign, for the purpose of assisting the distribution of gold when, as is frequently the case, the balance of trade is strong in India's favour and gold arrives in considerable quantities. I also think that supplies of gold coins should be laid down in the up-country districts with the object of giving the general public effective opportunities of obtaining gold coins.

Action on the report as a whole has been deferred until after the termination of the war—indeed it is doubtful if any sort of general pronouncement will be made on the report, because of the great changes effected by the war—partial action has been taken in order to meet immediate necessities. Thus in 1914 the silver branch of the Gold Standard Reserve was abolished, the rupees held in that reserve being exchanged for an equivalent in gold taken from the Paper Currency Reserve. The Gold Standard Reserve—it is sometimes called the Gold Reserve Fund—now consists entirely of gold and gold securities. In 1914 a Notification was issued guaranteeing to issue sterling drafts on the Secretary of State in London—these are called for convenience Reverse Councils—at gold export point on demand. The extent of this demand will be found in the section dealing with the Paper Currency and the Gold Standard Reserve (see ante). Another important step was taken by the Secretary of State when he announced that he had exchanged the Consol holding in the Gold Standard Reserve for the new four and a half per cent. loan. The official communique said:—"the Secretary of State has converted the entire holdings of Consols in the Gold Standard Reserve amounting to £3,266,391 into stock of the new war loan to the value of £2,177,594. This has been done partly by the acquisition of conversion rights from the public and to a smaller extent by a direct tender for the new loan." In the autumn of 1914, when there seemed to be every likelihood of a complete break in the price of cotton unless special steps were taken to enable holders to carry the crop, the Government of India stiffened the money market by offering the Presidency Banks loans from the Paper Currency Reserve in order to assist in the financing of threatened trades. This help was not needed, because cotton recovered its value with surprising celerity, and there has been a surplus, rather than a deficiency of money. The invested portion of the Paper Currency Reserve has been increased. The question of a State Bank is in abeyance. When the scheme was first mooted its reception was generally hostile. It was impossible to see how the interests of the three Presidency Banks and of the large Joint Stock and Exchange Banks could be reconciled with a great State institution. Since then there has been a certain revulsion of feeling, though opinion is still nicely divided, and there are many who, whilst not hostile to a State Bank *per se*, are inclined to think that Government can be of more assistance in time of crisis by remaining outside banking and placing its resources at the disposal of the market through the Presidency Banks in time of pressure.

The Railways.

The history of Indian Railways very closely reflects the financial vicissitudes of the country. Not for some time after the establishment of Railways in England was their construction in India contemplated, and then to test their applicability to Eastern conditions three experimental lines were sanctioned in 1845. These were from Calcutta to Raniganj (120 miles), the East Indian Railway; Bombay to Kalyan (33) miles, Great Indian Peninsula Railway; and Madras to Arkonam (39 miles), Madras Railway. Indian Railway building on a serious scale dates from Lord Dalhousie's great minute of 1853, wherein, after dwelling upon the great social, political and commercial advantages of connecting the chief cities by rail, he suggested a great scheme of trunk lines linking the Presidencies with each other and the inland regions with the principal ports. This reasoning commended itself to the Directors of the East India Company, and it was powerfully reinforced when, during the Mutiny, the barriers imposed on free communication were severely felt. As there was no private capital in India available for railway construction, English Companies, the interest on whose capital was guaranteed by the State, were formed for the purpose. By the end of 1859 contracts had been entered into with eight companies for the construction of 5,000 miles of line, involving a guaranteed capital of £52 millions. These companies were (1) The East Indian; (2) the Great Indian Peninsula; (3) the Madras; (4) the Bombay, Baroda and Central India; (5) the Eastern Bengal; (6) the Indian Branch, now the Oudh and Rohilkund State Railway; (7) the Sind, Punjab and Delhi, now merged in the North Western State Railway; (8) the Great Southern of India, now the South Indian Railway. The scheme laid the foundations of the Indian Railway system as it exists to-day.

Early Disappointments.

The main principle in the formation of these companies was a Government guarantee on their capital, for this was the only condition on which investors would come forward. This guarantee was five per cent, coupled with the free grant of all the land required; in return the companies were required to share the surplus profits with the Government, after the guaranteed interest had been met; the interest charges were calculated at 22*d* to the rupee; the Railways were to be sold to Government on fixed terms at the close of twenty-five years and the Government were to exercise close control over expenditure and working. The early results were disappointing Whilst the Railways greatly increased the efficiency of the administration, the mobility of the troops, the trade of the country, and the movement of the population, they failed to make profits sufficient to meet the guaranteed interest. Some critics attributed this to the unnecessarily high standard of construction adopted, and to the engineers' ignorance of local conditions: the result was that by 1869 the deficit on the Railway budget was Rs. 166½ lakhs. Seeking for some more economical method of construction; the Government secured sanction to the building of lines by direct State Agency, and funds were allotted for the purpose, the metre gauge being adopted for cheapness. Funds soon lapsed and the money available had to be diverted to converting the Sind and Punjab lines from metre to broad-gauge for strategic reasons. Government had therefore again to resort to the system of guarantee, and the Indian Midland (1882-85), since absorbed by the Great Indian Peninsula; the Bengal-Nagpur (1883-87), the Southern Maratha (1882), and the Assam-Bengal (1891) were constructed under guarantees, but on easier terms than the first companies. Their total length was over 4,000 miles.

Famine and Frontiers.

In 1879, embarrassed by famine and by the fall of the exchange value of the rupee, Government again endeavoured to enlist unaided private enterprise. Four companies were promoted:—the Nilgiri, the Delhi-Umballa-Kalka, the Bengal Central, and the Bengal North-Western. The first became bankrupt, the second and third received guarantees, and the Tirhut Railway had to be leased to the fourth. A step of even greater importance was taken when Native States were invited to undertake construction in their own territories, and the Nizam's Government guaranteed the interest on 330 miles of line in the State of Hyderabad. This was the first of the large system of Native State Railways. In the first period up to 1870, 4,255 miles were opened, of which all save 45 were on the broad gauge; during the next ten years there were opened 4,239, making the total 8,494 (on the broad gauge 6,562, the metre 1,865, and narrow 67). Then ensued a period of financial ease. It was broken by the fall in exchange and the costly lines built on the frontier. The Penjdeh incident, which brought Great Britain and Russia to the verge of war, necessitated the connection of our outposts at Quetta and Chaman with the main trunk lines. The sections through the desolate Harnai and Bolan Passes were enormously costly; it is said that they might have been ballasted with rupees; the long tunnel under the Khojak Pass added largely to this necessary, but unprofitable outlay.

Rebate Terms Established.

This induced the fourth period—the system of rebates. Instead of a gold subsidy, companies were offered a rebate on the gross earnings of the traffic interchanged with the main line, so that the dividend might rise to four per cent. but the rebate was limited to 20 per cent. of the gross earnings. Under these conditions, there were promoted the Ahmedabad-Prantej, the South Behar, and the Southern Punjab, although only in the case of the first were the terms strictly adhered to. The Barsi Light Railway, on the two feet six inches gauge, entered the field without any guarantee, and with rolling stock designed to illustrate the carrying power of this gauge. The rebate terms being found unattractive in view of the competition of 4 per cent. trustee stocks, they were revised in 1896 to provide for an

absolute guarantee of 3 per cent. with a share of surplus profits, or rebate up to the full extent of the main line's net earnings in supplement of their own net earnings, the total being limited to 3½ per cent. on the capital outlay. Under these terms, a considerable number of feeder line companies was promoted, though in none were the conditions arbitrarily exacted. As these terms did not at first attain their purpose, they were further revised, and in lieu was substituted an increase in the rate of guarantee from 3 to 3½ per cent. and of rebate from 3½ to 5 per cent. with equal division of surplus profits over 5 per cent. in both cases. At last the requirements of the market were met, and there has since been a mild boom in feeder railway construction and the stock of all the sound companies promoted stands at a substantial premium.

Railway Profits Commence.

Meantime a much more important change was in progress. The gradual economic development of the country vastly increased the traffic, both passenger and goods. The falling in of the original contracts allowed Government to renew them on more favourable terms. The development of irrigation in the Punjab and Sind transformed the North-Western State Railway. Owing to the burden of maintaining the unprofitable Frontier lines, this was the Cinderella Railway in India—the scapegoat of the critics who protested against the unwisdom of constructing railways from borrowed capital. But with the completion of the Chenab and Jhelum Canals, the North-Western became one of the great grain lines of the world, choked with traffic at certain seasons of the year and making a large profit for the State. In 1900 the railways for the first time showed a small gain to the State. In succeeding years the net receipts grew rapidly. In the four years ended 1907-08 they averaged close upon £2 millions a year. In the following year there was a relapse. Bad harvests in India, accompanied by the monetary panic caused by the American financial crisis, led to a great falling off in receipts just when working expenses were rising, owing to the general increase in prices. Instead of a profit, there was a deficit of £1,240,000 in the railway accounts for 1908-09. But in the following year there was a reversion to a profit, and the net Railway gain has steadily increased. For the year ended March 1913 this gain amounted to £5·49 millions (Rs. 823 lakhs). Although in a country like India, where the finances are mainly dependent upon the character of the monsoon, the railway revenue must fluctuate, there is no reason to anticipate a further deficit, but every ground for hoping that the railway profits will fill the vacuum in the Indian revenues caused by the cessation of the opium trade with China.

Contracts Revised.

A very important factor in this changed position is the revision of the original contracts under which the guaranteed lines were constructed. The five per cent. dividend, guaranteed at 22*d.* per rupee, and the half-yearly settlements made these companies a drain on the State at a time when their stock was at a high premium. The first contract to fall in was the East Indian, the great line connecting Calcutta with Delhi and the Northern provinces. When the contract lapsed, the Government exercised their right of purchasing the line, paying the purchase-money in the form of terminable annuities, derived from revenue, carrying with them a sinking fund for the redemption of capital. The railway thus became a State line; but it was released to the Company which actually works it. Under these new conditions the East Indian Company brought to the State in the ten years ended 1909, after meeting all charges, including the payments on account of the terminable annuity by means of which the purchase of the line was made, and interest on all capital outlay subsequent to the date of purchase, a clear profit of nearly ten millions. At the end of seventy-four years from 1880, when the annuity expires, the Government will come into receipt of a clear yearly income of upwards of £2,700,000, equivalent to the creation of a capital of sixty to seventy millions sterling. No other railway shows results quite equal to the East Indian, because, in addition to serving a rich country by an easy line, it possesses its own collieries and enjoys cheap coal. But with allowance for these factors, all the other guaranteed companies which have been acquired under similar conditions as their contracts expired, have proportionately swelled the revenue and assets of the State. It is difficult to estimate the amount which must be added to the capital debt of the Indian railways in order to counterbalance the loss during the period when the revenue did not meet the interest charges. According to one estimate it should be £50 millions. But even if that figure be taken, Government have a magnificent asset in their railway property.

Improving Open Lines.

These changes induced a corresponding change in Indian Railway policy. Up to 1900 the great work had been the provision of trunk lines. But with the completion of the Nagda-Muttra line, providing an alternative broad gauge route from Bombay to Delhi through Eastern Rajputana, the trunk system was virtually complete. A direct broad gauge route from Bombay to Sind is needed, but chiefly for strategic purposes. The poor commercial prospects of the line and the opposition of the Rao of Cutch to any through line in his territories, keep this scheme in the background. There does not exist any through rail connection between India and Burma, although several routes have been surveyed; the mountainous character of the region to be traversed, and the easy means of communication with Burma by sea, rob this scheme of any living importance. Further Survey work was undertaken in November 1914, the three routes to be surveyed being the coast route, the Manipur route, and the Hukong valley route. The metre gauge systems of Northern and Southern India must also be connected and Karachi given direct broad-gauge connection with Delhi, a project that is now under investigation. But these works are subordinate to the necessity for bringing the open lines up to their traffic requirements and providing them with feeders. The sudden in-

crease in the trade of India found the main lines totally unprepared. Costly works were necessary to double lines, improve the equipment, provide new and better yards and terminal facilities and to increase the rolling stock. Consequently the demands on the open lines have altogether overshadowed the provision of new lines. Even then the railway budget was found totally inadequate for the purpose, and a small Committee sat in London, under the chairmanship of Lord Inchcape, to consider ways and means. This Committee found that the amount which could be remuneratively spent on railway construction in India was limited only by the capacity of the money market. They fixed the annual allotment at £12,000,000 a year. Even this reduced sum cannot always be provided.

Government Control.

As the original contracts carried a definite Government guarantee of interest, it was necessary for Government to exercise strong supervision and control over the expenditure during construction, and over management and expenditure after the lines were open for traffic. For these purposes a staff of Consulting Engineers was formed, and a whole system of checks and counterchecks established, leading up to the Railway Branch of the Public Works Department of the Government of India. As traffic developed, the Indian Railways outgrew this dry nursing, and when the original contracts expired, and the interests of Government and the Companies synchronised, it became not only vexatious but unnecessary. Accordingly in 1901-02 Mr. Thomas Robertson was deputed by the Secretary of State to examine the whole question of the organisation and working of the Indian Railways, and he recommended that the existing system should be replaced by a Railway Board, consisting of a Chairman and two members with a Secretary. The Board was formally constituted in March 1905. The Board is outside, but subordinate to the Government of India in which it is represented by the Department of Commerce and Industry. It prepares the railway programme of expenditure and considers the greater questions of policy and economy affecting all the lines. Its administrative duties include the construction of new lines by State agency, the carrying out of new works on open lines, the improvement of railway management with regard both to economy and public convenience, the arrangements for through traffic, the settlement of disputes between lines, the control and promotion of the staff on State lines, and the general supervision over the working and expenditure of the Company's lines. Two minor changes have taken place since the constitution of the Railway Board. In 1908, to meet the complaint that the Board was subjected to excessive control by the Department of Commerce and Industry, the powers of the Chairman were increased and he was given the status of a Secretary to Government with the right of independent access to the Viceroy; he usually sits in the Imperial Legislative Council as the representative of the Railway interest. In 1912 in consequence of complaints of the excessive interference of the Board with the Companies, an informal mission was undertaken by Lord Inchcape to reconcile differences. The constitution of the Board is now undergoing further inquiry, and the development generally favoured in the establishment of a Railway Member of the Viceroy's Executive Council.

Management.

The Railways managed by Companies have Boards of Directors in London. They are represented in India by an Agent, who has under him a Traffic Manager, a Chief Engineer, a Locomotive Superintendent, a Storekeeper, a Police Superintendent, (who is appointed by Government), and an Auditor. The State Railways are similarly organised.

Clearing House.

Proposals have several times been made for the establishment of a Clearing House but the distances are too great. The work which would ordinarily be done by the Clearing House is done by the Audit Office of each Railway.

The Railway Conference.

In order to facilitate the adjustment of domestic questions, the Railway Conference was instituted in 1876. This Conference was consolidated into a permanent body in 1903 under the title of the Indian Railway Conference Association. It is under the direct control of the railways, it elects a President from amongst the members, and it has done much useful work.

The Indian Gauges.

The standard gauge for India is five feet six inches. When construction was started the broad gauge school was strong, and it was thought advisable to have a broad gauge in order to resist the influence of cyclones. But in 1870, when the State system was adopted it was decided to find a more economical gauge, for the open lines had cost £17,000 a mile. After much deliberation, the metre gauge of 3 feet 3⅜ inches was adopted, because at that time the idea of adopting the metric system for India was in the air. The original intention was to make the metre gauge lines provisional; they were to be converted into broad gauge as soon as the traffic justified it: consequently they were built very light. But the traffic expanded with surprising rapidity, and it was found cheaper to improve the carrying power of the metre gauge lines than to convert them to the broad gauge. So, except in the Indus Valley, where the strategic situation demanded an unbroken gauge, the metre gauge lines were improved and they become a permanent feature in the railway system. Now there is a great metre gauge system north of the Ganges connected with the Rajputana lines and Kathiawar. Another System in Southern India embracing the Southern Maratha and the South India Systems. These are not yet connected but the necessary link from Khandwa by way of the Nizam's Hyderabad-Godaveri Railway cannot be long delayed. All the Burma lines are on the metre gauge. Since the opening of the Barsi line, illustrating the capacity of the two feet six inch gauge, there has been developed a tendency to construct feeders on this rather than on the metre gauge.

STATISTICAL POSITION.

The Administration Report of the Railways in India for the year 1915-16 dealt with the first complete year during the whole of which war conditions have prevailed; conditions which are reflected in most of the figures dealt with. The most notable features are the reduced capital expenditure; and the recovery of railway gross receipts, which had seriously deteriorated in 1914-15, unaccompanied by a corresponding increase of outlay charged to revenue, due to the adoption of special measures designed to reduce expenses to the lowest practicable limit. This recovery of earnings without a rise of revenue expenditure resulted in a drop of the percentage of working expenses to gross earnings to a figure (50·91 per cent) which has been approached rarely during recent years.

Capital.—The capital outlay incurred by the Government in the purchase and construction of its railways including the liability which remains to be discharged by means of Annuity and Sinking Fund payments, amounted at the end of 1915-16 to £ 365,813,347.

The outlay incurred during 1915-16 was £ 4,492,333 distributed as follows:—

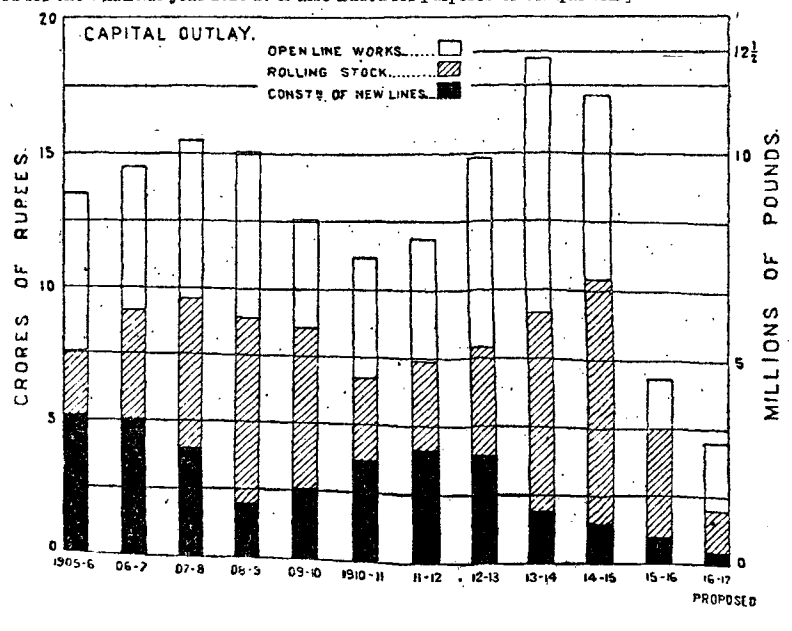
	Rs.
Open Line Works including Suspense	1,74,14,000
Rolling Stock	4,05,64,000
New Lines	94,07,000
Total ..	6,73,85,000
Equivalent at Rs. 15 £ 1 to	£4,492,333

During the year the actual capital expenditure fell short of the sanctioned grant for the year by Rs. 491 lakhs. This large lapse was due to endeavours made during the year to reduce outlay to the lowest possible limits on account of the war as well as to difficulty experienced in importing material required for works. The expenditure of £3 millions on capital account sanctioned for 1916-17 was fixed so as to continue progress, but generally at a reduced rate on works already in hand which could not be interrupted without loss or great inconvenience. Funds were not been allotted for the commencement of any new line of railway, and provision was made only for such new works as cannot with safety be postponed. The bulk of the expenditure proposed to be incurred in this year is on open lines.

Capital Outlay.—The actual capital outlay on railways which have been financed by private enterprise such as Branch Lines promoted by Companies, District Board Lines, Native State Lines, etc., amounted at the end of 1915-16 to Rs. 64,23,21,000. The capital expenditure on such lines during the year was as follows:—

	Rs.
Branch Line Companies' Railways.	2,05,39,000
District Board Lines	14,12,000
Native State Lines	1,16,57,000
Total ..	3,36,08,000

The following diagram shows graphically how these figures compare with those of past years. The distribution of the grant of £ 3 millions (Rs. 4,50 lakhs) which has been sanctioned for the financial year 1916-17 is also added for purposes of comparison.



Financial Results.

The following table compares the financial results attained in the working of the State Railways during the year 1915-16 with those of previous years (in the case of money the figures are shewn in thousands):—

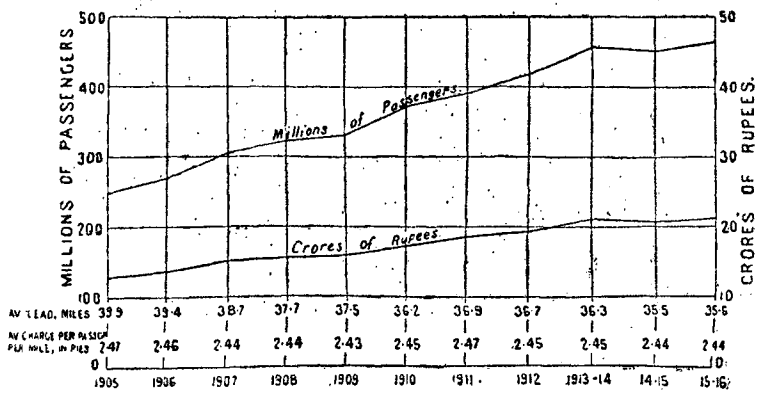
	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.	1915-16.
	£	£	£	£	£	£
Capital at charge at end of each year ..	324,290	331,247	340,103	351,302	361,556	365,046
REVENUE.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Gross traffic receipts.—State Railways ..	45,94,46	50,36,87	55,02,95	56,31,92	54,15,78	57,26,43
Deduct—Working Expenses	24,48,54	25,89,46	28,02,31	29,35,91	29,52,87	29,53,00
NET RECEIPTS ..	21,45,92	24,47,41	27,00,64	26,96,01	24,62,91	27,73,43
	£	£	£	£	£	£
Equivalent in sterling Rs. 15=£1 ..	14,306	16,316	18,004	17,973	16,419	18,489
Percentage return on capital at charge .	4·41	4·93	5·29	5·12	4·54	5·06

The net working profits from State Railways after meeting interest and other miscellaneous charges amounted in the year 1915-16 to £4,076,000. It would have been more had it not been that in accordance with instructions of the Secretary of State for India certain Annuity and Sinking Fund payments which really go to the discharge of debt are included in the Railway Revenue Account.

The working expenses during the year 1915-16 amounted to Rs. 29.53 lakhs or almost exactly the same as the actual working expenses of 1914-15. This result is remarkable seeing that the receipts of the year exceeded those of 1914-15 by over 3 crores. It was due entirely to expenditure especially outlay on special renewals having been restricted on account of the war to the amount which was imperative and immediately remunerative.

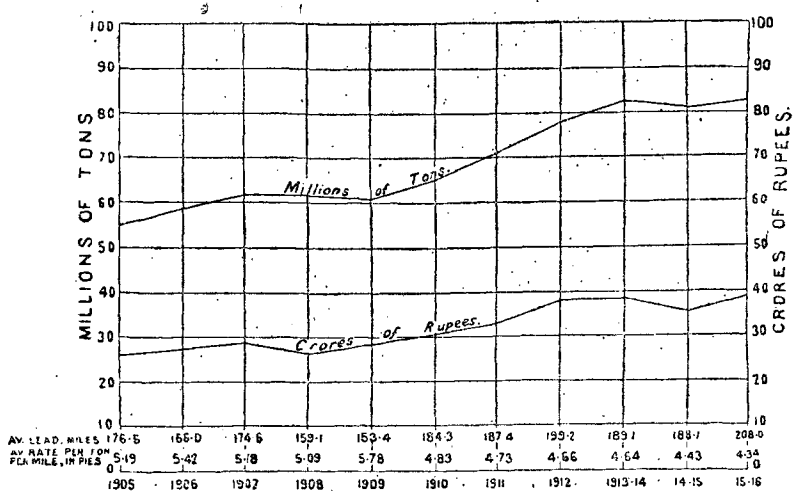
Passenger Earnings.

The number of passengers carried and the earnings therefrom on all Indian railways are compared below:—



The increase in the passenger traffic during the year under review as compared with that of 1914-15, was chiefly due to the revival of traffic after the outbreak of war, to the opening of new lines, the movement of troops and to fairs, pilgrimages and marriage parties.

Goods Traffic.—A similar comparison of the tonnage of, and earnings from, goods traffic is afforded by the following diagram :—



The better results of the year under review are attributable to the recovery of trade, as in the case of the coaching traffic, to the opening of new lines and to the movement of military stores. The diversion of the coal traffic to Bombay from the sea to the rail route owing to the abnormal shortage of shipping was also accountable for the increase.

The gross earnings of railways other than State lines, such as District Boards lines, Native State lines, etc., during 1915-16 amounted to Rs. 729·85 lakhs, as compared with Rs. 666·00 lakhs in 1914-15 being an increase of Rs. 63·85 lakhs, and as the working expenses were more only by Rs. 27·94 lakhs than the previous year, the net earnings rose from Rs. 333·41 lakhs to Rs. 369·32 lakhs in 1915-16 or an increase of Rs. 35·91 lakhs. These net earnings yielded a return on the Capital outlay (Rs. 6,074·48 lakhs) on open lines, that is on mileage earning revenue, of 6·08 per cent. as against 5·82 per cent. in 1914-15.

Mileage.—During the year 1915-16, 605·90 miles of railway were opened to traffic, bringing the total mileage open (after allowing for minor corrections due to realignments, etc.) up to 35,833 miles. The additional mileage was made up as follows :—

	5′-6″ gauge.	3′-3⅜″ gauge.	2′-6″ gauge.	2′-0″ gauge.	Total.
	Miles.	Miles.	Miles.	Miles.	Miles.
State lines worked by the State	..	..	..	..	..
State lines worked by Companies	84·01	56·75	1·07	..	141·83
Branch line Companies' railways under rebate terms, worked by the Branch line Company	..	..	32·52	..	32·52

Mileage—*continued.*

	5′-6″ gauge.	3′-3¾″ gauge.	2′-6″ gauge.	2′-0″ gauge.	Total.
Branch line Companies' railways under guarantee terms, worked by the main line	132·74	..	49·75	40·59	223·08
Companies' lines subsidized by the Government of India	..	2·52	1·78	..	4·30
Unassisted Companies' lines	..	..	..	18·09	18·00
District Board lines	21·09	25·04	..	..	46·13
Native State lines worked by Native States ..	..	41·41	29·79	..	71·20
Native State lines worked by the main line ..	..	46·00	8·89	..	54·89
Companies' lines guaranteed by Native States ..	..	..	13·95	..	13·95
TOTAL ..	237·84	171·72	137·75	58·59	605·90

Ten Years' Progress.—The progress made during the past ten years is summarised in the following table :—

Gauge.	Mileage opened at the end of									
	1906	1907	1908	1909	1910	1911	1912	1913-14	1914-15	1915-16
5′-6″ ..	15,548	15,821	15,951	16,309	16,701	17,016	17,189	17,641	17,827	18,060
3′-3¾″ ..	12,149	12,613	12,863	13,323	13,530	13,759	14,165	14,389	14,552	14,671
2′-6″ ..	1,071	1,234	1,394	1,443	1,436	1,632	1,692	2,174	2,402	2,539
2′-0″ ..	329	342	368	415	432	432	438	452	504	563
Total ..	29,097	30,010	30,576	31,490	32,099	32,839	33,484	34,656	35,285	35,833

Branch Line Companies.—The Branch Line Terms underwent no change during the year. They provide for the grant by the Government of India of financial assistance to private companies furnishing capital for the construction of feeder lines to existing railways in either of the following terms :—

1. A firm guarantee by Government of a return of 3½ per cent. on the paid up share capital of the Branch Line Company.

2. A rebate paid by the parent line from its net earnings from traffic brought to it by the branch, sufficient to make up a dividend of 5 per cent. on the paid up share capital ; the liability of the main line being, however, limited to the total of its net earnings from such traffic.

The option is allowed to Companies, under certain circumstances, of raising a portion of their capital under guarantee terms and the remainder under rebate terms. Advantage was recently taken of this option by the Mymensingh-Bhairab Bazaar Railway Company, floated with an authorized capital of Rs. 86 lakhs of which Rs. 23 lakhs were raised under rebate terms and the balance under a guarantee.

In the province of Assam, on account of the relatively less developed state of the country and the difficulty experienced in obtaining capital for private railway enterprises under the ordinary terms, it has been provided that the Local Administration may in approved cases supplement the Imperial guarantee of 3½ per cent. described above by the grant from provincial funds of an additional guarantee for a specified term of years of 1 per cent. on the paid up capital of the Company.

Owing to the general financial stringency created by the war, it became necessary to consider whether, in order to conserve the money market for Government requirements, it was desirable to discontinue the flotation of Branch Line Companies until the end of the war. A drastic curtailment of expenditure under the Government's railway programme for the year 1916-17 had, however, already been decided upon and it was in the circumstances considered unnecessary to place any special restrictions on the operations of Branch Line Companies until the end of February 1916, when the market was closed to these as well as to local bodies in connection with the Government's own borrowing operations for the year 1916-17.

That the prevailing financial stringency has in no material degree adversely affected the business of Branch Line Companies will be clear from the table below, which gives details of the railways sanctioned for construction during the year:—

Name of railway.	Gauge.	Length.	Capital subscribed.	Financial assistance.
			Rs. (in lakhs).	
Kalighat-Falta	2′6″	25.91	16.50	Guarantee
Mayurbhunj	2′6″	38.92	22.25	Rebate.
Futwah-Islampur	2′6″	27.00	11.50	Guarantee.
Chaparmukh-Silghat	3′3⅜″	52.00	23.00	Guarantee.
Khulna-Bagirhat	2′6″	20.53	8.25	Rebate.
Jaijon Extension	5′6″	19.00	12.00	Rebate.
Larkhana-Jacobabad	2′6″	75.45	27.00	Rebate.
Katakhal-Lalabazar	3′3⅜″	23.30	9.00	Guarantee.

The results of the year show a continued preference for the narrower gauges the metre-gauge being adopted for the branch line, where the parent line is on that gauge, but the 2 feet 6 inches gauge, in every case but one, where the parent line is on the standard gauge.

In addition to the lines shown in the table, negotiations had been practically completed before the end of the year for 178 miles of railway, while applications covering an aggregate mileage of 3,656 miles and involving a total expenditure of some 13½ millions sterling were under consideration when the year closed.

The feature of the year as regards District Board enterprise in the Madras Presidency has been the greater extent to which the District Boards have made use of their facilities for borrowing.

The Madras Presidency still stands alone in this form of local enterprise, no other province having so far enacted legislation for the levy of a railway cess, though a bill empowering District Boards to levy a railway cess was introduced in the Legislative Council of the Punjab. The desirability of introducing legislation in this behalf has however been recognised elsewhere, and it may be expected that when the war is over, the necessary Acts will be passed to enable other provinces to follow the lead given by Madras.

Native States.—The progress of new construction in Native States was to some extent restricted owing to lack of funds caused by the large contributions direct and indirect, which the Native States have made to the Imperial resources for the conduct of the war. The Hanumangarh-Sadulpur, Bikaner-Kolayat and Veraval-Una railways in the Bikaner and Junagad States respectively aggregating 186 miles of new construction on the metre-gauge were sanctioned.

The total mileage of railways in Native States open to traffic at the close of the year was 4,644 miles, distributed between the various gauge as under:—

	Miles.
5′-6″ gauge	936·22
3′-3¾″ „	2,945·78
2′-6″ „	474·67
2′-0″ „	286·96

Accidents.—A gratifying feature of the period under review has been the remarkable freedom of railways from accidents to running trains of a specially serious nature.

The total number of persons of all classes killed by causes beyond their control was 38 against 76 and the number injured 237 against 329 in the previous year. Out of a total of 464 millions of passengers travelling 247 were killed and 821 injured, while of the former only 4 were killed through causes beyond their own control.

Employes.—The total number of servants in railway employ at the close of the year was 626,580 of which number 7,273 were Europeans, 10,412 Anglo-Indians and 608,895 Indians. Of the Europeans and Anglo-Indians 15,449 were enrolled as Volunteers. At the close of 1915-16 there were 11,232 children and 10,474 apprentices and workmen attending the Railway Schools.

War and Railways.—In addition to the very heavy traffic out of war conditions the Indian Railways had to meet several other military requirements. A considerable number of officers and men volunteered for military duty. In all the Railways set free 350 civil officers in addition to 47 Royal Engineer Officers and over 2,000 subordinates. A Munitions Branch of the Railway Board's Office was constituted in July 1915 for the manufacture of shells. Up to the 31st March 1916 India supplied to expeditionary forces 50 locomotives, 600 vehicles, 165 miles of rails and fastenings and half a million sleepers. Many hospital trains were equipped. The virtual closure of the sea route from Calcutta to Bombay for coal owing to the very high price of freight and the shortage of shipping threw a further very heavy burden on the railways. Before the war the annual export of coal from Calcutta to Madras, Bombay and Karachi was 1,443,544 tons. It is known that the additional volume of traffic thrown upon the railways was much greater than the ordinary figure of the coast-wise coal trade owing to the large demands on account of military and naval requirements. Experiments were made with the use of oil fuel instead of coal in order to economise transport from the distant coalfields to the North-west of India.

THE CHIEF RAILWAYS IN INDIA.

The Assam-Bengal Railway, which is constructed on the metre gauge, starts from Chittagong and runs through Surma Valley across the North Cachar Hills into Assam. It is worked under a limited guarantee by a company whose contract is terminable in 1921. The main line has an open mileage of 807·92. The total capital outlay is Rs. 1,649 lakhs, gross earnings 67 lakhs, net earnings, 14 lakhs and the percentage of net earnings on the capital outlay 0·91. The loss to the State for 1915-16 was Rs. 37,58,497.

Bengal and North-Western.

The Bengal and North-Western Railway was constructed on the metre gauge system by a company without any Government assistance other than free land and was opened to traffic in 1885. The system was begun in 1874 as the Tirhut State Railway. In 1890 this line was leased by Government to the Bengal and North-Western Railway. Since then extensive additions have been made in both sections. It is connected with the Rajputana metre gauge system at Cawnpore and with the Eastern Bengal State Railway at Khatihar and the Oudh and Rohilkhand Railway at Benares. The open mileage is 2,066·54. The total capital outlay amounts to Rs. 990 lakhs, gross earnings 102 lakhs, net earnings Rs. 60 lakhs and interest divided between the Government and Company Rs. 85 lakhs; percentage of total net income on capital outlay 6·46. Tirhut railway: Total capital outlay Rs. 873 lakhs, gross earnings Rs. 93 lakhs, net earnings Rs. 56 lakhs, gain to the State Rs. 24 lakhs, and percentage 6·91.

Bengal-Nagpur.

The Bengal-Nagpur Railway was commenced as a metre gauge from Nagpur to Chhatisgarh in the Central Provinces in 1887. A company was formed under a guarantee which took over the line, converted it to the broad gauge and extended it to Howrah, Cuttack and Katni. In 1901 a part of the East Coast State Railway from Cuttack to Vizagapatam was transferred to it and in the same year sanction was given for an extension to the coal fields and for a connection with the Branch or the East Indian Railway at Hariharpur. Open mileage 2,740·69; under construction or sanctioned 308·02; total 3,048·71. The total capital outlay is Rs. 4,076 lakhs, gross earnings Rs. 443 lakhs, net earnings 226 lakhs, percentage of net earnings on capital outlay is 5·96. The gain to the State is 68 lakhs,

Bombay Baroda.

The Bombay, Baroda and Central India Railway is one of the original guaranteed railways. It was commenced from Surat *via* Baroda to Ahmedabad, but was subsequently extended to Bombay. The original contract was terminable in 1880, but the period was extended to 1905; and then renewed under revised conditions. In 1885 the Rajputana

Malwa metre gauge system of State railways was leased to the Company and has since been incorporated in it. On the opening of the Nagda-Muttra, giving broad gauge connection through Eastern Rajputana with Delhi the working was entrusted to this Company. On the acquisition of the Company in April 1907 the purchase price was fixed at £11,685,581, The statistical working of the broad gauge shows a mileage of 996·05, the capital outlay 2,497 lakhs, gross earnings 373 lakhs, net earnings 196 lakhs, percentage of net earnings on the capital outlay 7·85; gain to the State 71 lakhs.

The metre gauge system of the Company shows a mileage of 1,821·61 ; total capital outlay 1,714 lakhs, gross earnings 319 lakhs, net earnings, 168 lakhs; percentage of net earnings on the capital outlay 9·81; gain to the State 111 lakhs.

Burma Railways.

The Burma Railway is an isolated line, and although various routes have been surveyed there is little prospect of its being connected with the Railway system of India on account of the difficult and sparsely populated country which intervenes. It was commenced as a State Railway and transferred in 1896 to a Company under a guarantee. The mileage is 1,598·46, total capital outlay Rs. 1,780 lakhs, gross earnings 199 lakhs, net earnings 84 lakhs; percentage of net earnings on the capital outlay 4·74, gain to the State 14·16 lakhs. Burma extensions have a total mileage of 253·18.

Eastern Bengal.

The Eastern Bengal State Railway was promoted under the original form of guarantee and was constructed on the broad gauge. The first portion of the line running to Calcutta over the Ganges was opened in 1862. In 1874 sanction was granted for the construction on the metre gauge of the Northern Bengal State Railway, which ran from the north bank of the Ganges to the foot of the Himalayas on the way to Darjeeling. These two portions of the line were amalgamated in 1884 into one State Railway. The open mileage is 1,748·03, capital total outlay 3,598 lakhs, gross earnings 348 lakhs, net earnings 137 lakhs, percentage of net earnings on capital outlay 3·83. Loss to the State Rs. 24,753 lakhs.

The East Indian.

The East Indian Railway is one of the three railways sanctioned for construction as experimental lines under the old form of guarantee. The first section from Howrah to Pandua was opened in 1854 and at the time of the Mutiny ran as far as Raniganj. It gives the only direct access to the port of Calcutta from Northern India and is consequently fed by all the large railway systems connected with it. In 1880 the Government purchased the line, paying the shareholders by annuities, but leased it again to the company to work under a contract which is terminable in 1919. The open mileage is 2,719·05 under construction or sanction 94·18. total 2,813·23. Total capital outlay (on 2 448 miles) Rs. 7,150 lakhs, gross earnings 1,051 lakhs, net earnings Rs. 639 lakhs; percentage of net earnings on capital outlay 8·95; gain to the State 239 lakhs.

Great Indian Peninsula.

The Great Indian Peninsula Railway is the earliest line undertaken in India. It was promoted by a Company under a guarantee of 5 per cent. and the first section from Bombay to Thana was open for traffic in 1853. Sanction was given for the extension of this line *via* Poona to Raichur, where it connects with the Madras Railway, and to Jubbulpore where it meets the East Indian Railway. The feature of the line is the passage of the Western Ghats, these sections being 15¾ miles on the Bhore Ghat and 9¼ miles on the Thul Ghat which rise 1,131 and 972 feet. In 1900; the contract with the Government terminated and under an arrangement with the Indian Midland Railway that line was amalgamated and leased to a Company to work. The open mileage is 3,268·83, under construction or sanction 162·07; total 3,430·90. The total capital outlay on the Company's own system of 2,534·30 miles is 6,518 lakhs, gross earnings, 904 lakhs, net earnings 387 lakhs, percentage of net earnings on capital outlay 4·95 ; gain to the State 21 lakhs.

Madras Railway.

The Madras Railway was the third of the original railways constructed as experimental lines under the old form of guarantee. It was projected to run in a north-westerly direction in connection with the Great Indian Peninsula Railway and in a south-westerly direction to Calicut. On the expiry of the contract in 1907 the line was amalgamated with the Southern Mahratta Railway Company, a system on the metre gauge built to meet the famine conditions in the Southern Mahratta Country and released to a large Company called the Madras and Southern Mahratta Railway Company. The mileage is 3,168·58. The capital outlay on the Company's broad gauge system of 1047·59 miles is 1,863 lakhs ; gross earnings 258 ; net 126 percentage 6.78 ; metre-gauge-mileage 2567·19 ; capital outlay 3,241 lakhs ; gross earnings 415 lakhs ; net 196 lakhs: percentage 6.08 ; loss to the State 13 lakhs ; annuity payment 73 lakhs.

The North-Western.

The North-Western State Railway began its existence at the Sind-Punjab-Delhi Railway, which was promoted by a Company under the original form of guarantee and extended to Delhi, Multan and Lahore and from Karachi to Kotri. The interval between Kotri and Multan was unbridged and the railway traffic was exchanged by a ferry service. In 1871-72 sanction was given for the connection of this by the Indus Valley State Railways and at the same time the Punjab Northern State Railway from Lahore towards Peshawar was begun. In 1886 the Sind-Punjab-Delhi Railway was acquired by the State and amalgamated with these two railways under the name of the North-Western State Railway. It is the longest railway in India under one administration. The opened mileage is 5434·66. under construction

or sanction 140·93, total 5575.59. The statistical results of the working of the State owned 4009·33 miles are total outlay Rs. 86·38 lakhs, gross earnings 841 lakhs, net earnings 360 lakhs, percentage of earnings on capital outlay 4·17, gain to the State 18 lakhs.

Oudh and Rohilkhand.

Oudh and Rohilkhand Railway was another of the lines constructed under the original form of guarantee. It began from the north bank of the Ganges running through Rohilkhand as far as Saharanpur where it joins the North-Western State Railway. It was not until 1887 that the bridge over the Ganges was completed and connected with the East Indian Railway. To effect a connection between the metre gauge systems to the North and those to the South of the Ganges, a third rail was laid between Bhuriwal and Cawnpore. The Company's contract expired in 1889 when the Railway was purchased by the State and has since been worked as a State Railway. The opened mileage is 1,638·91, under construction and sanction 64·55, total 1,703·46. The total capital outlay on the State system of 1,600 miles is 2,146 lakhs, gross earnings 223 lakhs, net earnings 112 lakhs, percentage of net earnings on capital outlay 5·24, gain to the State was 20 lakhs.

The South Indian.

The South Indian Railway was one of the original guaranteed railways. It was begun by the Great Southern India Railway Company as a broad gauge line; but was converted after the seventies to the metre gauge. This line has been extended and now serves the whole of the Southern India, south of the south-west line of the Madras Railway. Between Tuticorin and Ceylon a ferry service was formerly maintained, but a new and more direct route to Ceylon *via* Rameshwaram was opened at the beginning of 1914. As the original contract ended in 1907, a new contract was entered upon with the Company on the 1st of January 1908. The open mileage is 1787·86, under construction or sanction 133·07, total 1,920·93. The statistical results of the working of the Company's system of 1,455·17 miles gives a capital outlay, 1,896 lakhs, gross earnings 295 lakhs, net earnings 149 lakhs, percentage of net earnings to capital outlay of 7·90; gain to the State 80 lakhs.

The Native States.

The principal Native State Railways are: The Nizam's, constructed by a company under a guarantee from the Hyderabad State; the Kathiawar system of railways, constructed by subscriptions, among the several Chiefs in Kathiawar; the Jodhpur-Bikaner Railway, constructed by the Jodhpur and Bikaner Chiefs; the system of railways in the Punjab constructed by the Patiala, Jind, Maler Kotla, and Kashmir Chiefs; and the railways in Mysore constructed by the Mysore State.

INDIA AND CEYLON.

The possibility of connecting India and Ceylon by a railway across the bank of sand extending the whole way from Rameswaram to Mannar has been reported on from time to time, since 1895 various schemes having been suggested.

The South Indian Railway having been extended to Dhanushkodi, the southernmost point of Rameswaram Island, and the Ceylon Government Railway to Talaimannar, on Mannar Island, two points distant from each other about 21 miles across a narrow and shallow strait, the project has again been investigated with the idea of connecting these two terminal stations by a railway constructed on a solid embankment raised on the sand bank known as "Adam's Bridge", to supersede the ferry steamer service which has been established between these two points.

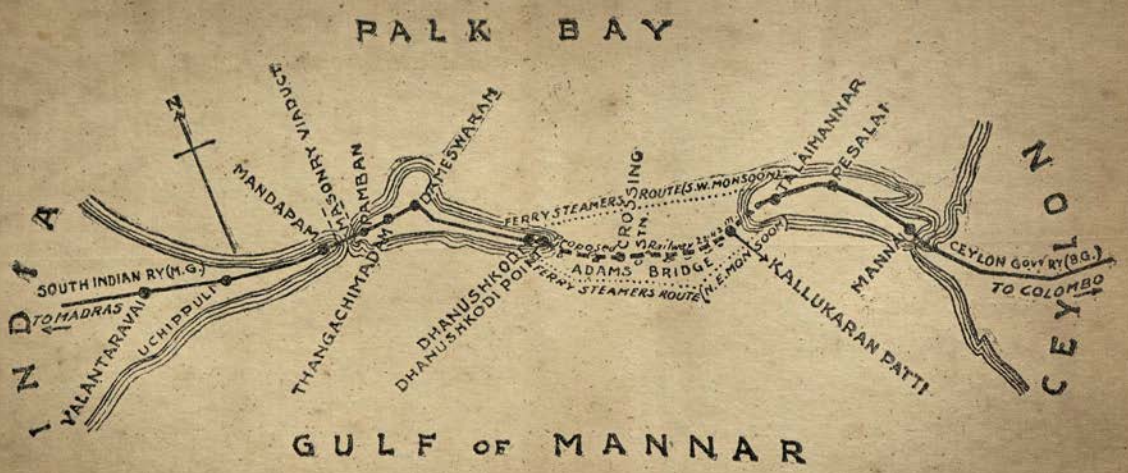
In 1913, a detailed survey was made by the South Indian Railway Company, and a project has now been prepared. This project contemplates the construction of a causeway from Dhanushkodi Point on the Indian side to Talaimannar Point on the Ceylon side, a length of 20.05 miles of which 7.19 will be upon the dry land of the various lands, and 12.86 will be in water. The sections on dry land will consist of low banks of sand pitched with coral and present no difficulty. The section through the sea will be carried on a causeway which it is proposed to construct in the following way. A double row of reinforced concrete piles, pitched at 10 feet centres and having their inner faces 14 feet apart, will first be driven into the sand. These piles will then be braced together longitudinally with light concrete arches and chains and transversely with concrete ties, struts and chains. Behind the piles slabs of reinforced concrete will be slipped into position, the bottom slabs being sunk well into the sand of the sea bottom. Lastly, the space enclosed by the slabs will be filled in with sand.

The top of the concrete work will be carried to six feet above high water level, and the rails will be laid at that level. The sinking of the piles and slabs will be done by means of water jets. This causeway, it is expected, will cause the suspended sand brought up by the currents, to settle on either side bringing about rapid accretion and eventually making one big island of Rameswaram island and Mannar island.

If this method of construction is adopted, it is estimated that the total cost of the causeway and works at the two terminal points, *viz*:— Dhanushkodi and Talaimannar will be approximately 111 lakhs.

Indo-Burma Connection.

The raids of the Emden in the Bay of Benga in 1914, and the temporary interruption of communications between India and Burma, stimulated the demand for a direct railway connection between India and Burma. Government accepted the position and appointed Mr. Richards, M. Inst. C.E., to be the engineer-in-charge of the surveys to determine the best



PROPOSED RAILWAY FROM INDIA TO CEYLON.

route for a railway from India to Burma. The coast route appears to be the favoured one. This would start from Chittagong, which is the terminus and head-quarters of the Assam-Bengal Railway and a seaport for the produce of Assam. The route runs southwards through the Chittagong district, a land of fertile rice fields intersected by big rivers and tidal creeks and it crosses the Indo-Burma frontier, 94 miles from the town of Chittagong. For about 160 miles further it chiefly runs through the fertile rice lands of Arrakan and crosses all the big tidal rivers of the Akyab delta. These include the Kalidan river which drains 4,700 miles of country and even at a distance of about 30 miles from its mouth is more than half a mile wide. About 260 miles from Chittagong the railway would run into the region of mangrove swamps which fringe the seacoast north and south of the harbour of Kaukkphu stretching out into the mangrove swamps like ribs from the backbone. Innumerable spurs of the Arrakan Yoma have to be crossed. Yoma is a mountain ridge which extends from Cape Negrais northwards until it loses itself in a mass of tangled hills east of Akyab and Chittagong. At its southern end the height of the ridge is insignificant but it has peaks as high as 4,000 feet before it reaches the altitude of Sandway and further north it rises much higher. It is a formidable obstacle to railway communication between India and Burma. This route is estimated to cost about £7,000,000 and would have to be supplemented by branch lines to Akyab where there is at present a considerable rice traffic and the cost of this would have to be added to the £7,000,000 already referred to.

The other routes examined have been the Hukong Valley route and the Manipur route which were surveyed by the late Mr. R. A. Way many years ago. The Manipur route is estimated to cost about £5,000,000 as it has to cross three main ranges of hills with summit levels of 2,650, 3,600 and 8,900 feet long. Altogether there would be about four miles of tunnelling through the three main ridges and through other hills and more than 100 miles of expensive undulating railway with grades as steep as 1 in 50 and 11,000 feet of aggregate rise and fall. The Hukong valley route seems to be the cheapest one as it is estimated to cost £3,500,000. This line is only about 284 miles long and it presents fewer engineering difficulties than either the Coast or the Manipur route. One hundred and fifty miles of this route lie in open country capable of cultivation though at present it is only very thinly populated. Only one range of hills has to be crossed and this can be negotiated with a summit tunnel of 5,000 feet long at a height of 2,500 feet. There are less than fifty miles of very heavy work and only about 4,500ft. aggregate of rise and fall.

It is understood that the construction of this line will constitute one of the first changes on the Railway Budget when normal conditions are restored.

Main results of working of all Indian Railways treated as one system.

—	Particulars.	1908.	1909.	1910.	1911.	1912.	1913-14.	1914-15.	1915-16.
1	Mileage open at close of the calendar year .. .. Miles	30,576	31,490	32,099	32,339	33,484	34,652	35,285	35,833
2	Total Capital outlay, including ferries and suspense, on open lines (in thousands of rupees) .. Rs.	4,11,91,71	4,29,83,20	4,39,04,73	4,50,06,80	4,65,15,00	4,95,08,64	5,19,22,13	5,29,98,29
3	Gross earnings (in thousands of rupees) .. .. ,,	44,82,69	47,06,38	51,14,22	55,27,92	61,65,07	63,58,56	60,42,01	64,66,04
4	Gross earnings per mile open .. ,,	14,663	14,948	15,936	16,833	18,412	18,350	17,123	18,041
5	Gross earnings per mile open per week .. .. ,,	282	287	306	324	354	353	329	347
6	Gross earnings per train-mile .. ,,	3·51	3·67	3·85	3·87	4·04	4·07	3·84	4·07
7	Total working expenses (in thousands of rupees).. .. .. ,,	27,00,25	26,38,48	27,15,72	28,83,92	30,15,92	32,93,04	32,74,10	32,91,95
8	Working expenses per mile open . ,,	8,833	8,380	8,462	8,782	9,007	9,504	92,70	9,185
9	Working expenses per train-mile.. ,,	2·11	·06	2·04	2·02	1·98	2·11	2·08	2·07
10	Percentage of working expenses to gross earnings .. Per cent.	60·24	·06	53·10	52·17	48·92	51·79	54·19	50·91
11	Net earnings (in thousands of rupees) .. .. Rs.	17,82,44	20,67,90	23,98,50	26,44,00	31,49,15	30,65,52	27,67,91	31,74,09
12	Net earnings per mile open .. ,,	5,830	·6,568	7,474	8,051	9,405	8,846	7,844	8,856
13	Net earnings per train-mile .. ,,	1·40	1·61	1·81	1·85	2·06	1·96	1·76	2·00
14	Percentage of net earnings on total capital outlay (item 2)... Per cent.	4·33	4·81	5·46	5·87	6·77	6·19	5·33	5·99
15	Coaching train-miles (in thousands) .. .. ..Train-miles	47,885	48,191	48,598	50,833	52,093	55,972	58,569	56,364

Main results of working of all Indian Railways treated as one system—*contd.*

—	Particulars.		1908.	1909.	1910.	1911.	1912.	1913-14.	1914-15.	1915-16.
16	Goods train-miles (in thousands)	Train-Miles	44,875	44,065	47,690	53,219	59,992	57,933	56,359	62,766
17	Mixed train-miles (in thousands)..	„	29,944	30,859	31,986	33,746	34,940	34,581	35,514	34,471
18	Total, including miscellaneous train-miles (in thousands) ..	„	127,881	128,260	132,823	142,944	152,761	156,276	157,142	159,038
19	Unit-mileage of passengers (in thousands)	Unit-miles	12,102,929	12,364,579	13,432,477	14,372,943	15,318,872	16,614,088	16,022,849	16,528,646
20	Freight ton-mileage of goods (in thousands)	Ton-miles	9,025,830	9,340,441	12,092,916	13,358,264	15,628,595	15,623,235	15,225,957	17,157,841
21	Average miles a ton of goods was carried	Miles	159·07	153·37	184·33	187·44	199·15	182·11	188·04	207·98
22	Average rate charged for carrying a ton of goods one mile ..	Pies	5·09	5·78	4·83	4·73	4·66	4·64	4·43	4·34
	Average miles a passenger was carried.									
23	1st class	Miles	100·76	103·35	99·72	111·60	106·54	112·46	123·88	113·18
24	2nd class	„	71·26	69·24	75·07	76·33	74·77	74·58	80·04	93·44
25	Intermediate class..	„	58·82	54·89	52·41	57·27	51·90	51·13	49·72	50·20
26	3rd class	„	38·65	38·74	37·12	37·72	37·81	37·40	36·59	36·60
27	Season and Vendors' tickets ..	„	8·94	8·89	8·79	8·78	8·64	8·71	8·50	8·52
28	Total	„	37·68	37·54	36·15	36·87	36·72	36·30	35·52	35·59
	Average rate charged per passenger per mile.									
29	1st class	Pies	12·95	12·89	14·55	14·29	14·25	14·48	12·79	13·68
30	2nd class	„	5·76	5·94	6·07	6·73	6·64	6·60	6·23	5·50
31	Intermediate class..	„	3·04	3·06	3·15	3·10	3·12	3·14	3·16	3·16
32	3rd class	„	2·28	2·28	2·28	2·30	2·30	2·29	2·29	2·29
33	Season and Vendors' tickets ..	„	1·39	1·42	1·42	1·43	1·45	1·42	1·42	1·42
34	Total	„	2·44	2·43	2·45	2·47	2·45	2·45	2·44	2·44

§ Mileage of Railway Lines in India open for Traffic at end of year.

Railways.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913-14.	1914-15.	1915-16.
STATE LINES.										
Agra Delhi Chord*	126	126	126	126	126	126	126	126	126	126
Assam-Bengal*	775	775	775	771	790	790	805	812	848	808
Baran-Kotah*	..	..	14	40	40	40	40	40	40	40
Bengal Central	†	†	†	†	†	†	†	†	†	†
Bengal-Nagpur*	1,695	1,734	1,774	1,791	1,808	1,852	1,852	1,877	1,877	1,889
Bezwada Extension*	21	21	21	21	21	21	21	21	21	21
Bhopal-Itarsi*	13	13	13	13	13	12	12	12	12	12
Bombay, Baroda & Central India*	504	504	504	504	504	504	2,762	2,812	2,812	2,818
Broach-Jambusar *	..	..	..	..	..	..	..	..	30	30
Burma*	1,340	1,475	1,527	1,527	1,527	1,527	1,529	1,529	1,529	1,529
Cawnpore-Banda *	..	..	..	..	..	..	..	33	76	76
Cawnpore-Burhwal	80	80	80	80	80	80	80	80	80	80
Dhone-Kurnool*	..	..	..	32	32	32	32	32	32	32
East Indian*	2,165	2,208	2,213	2,212	2,213	2,266	2,331	2,424	2,446	2,448
Eastern Bengal	1,272	1,274	1,274	1,503	1,508	1,510	1,570	1,581	1,639	1,639
Gondia-Chanda*	..	..	148	153	183	181	181	216	216	217
Great Indian Peninsula*	1,562	1,562	1,599	1,599	1,606	2,420	2,419	2,484	2,500	2,554
Indian Midland*	810	810	813	813	813	‡	‡	‡	‡	‡
Jakhal-Hissar *	..	..	..	..	..	..	..	51	50	50
Jodhpur-Hyderabad*	124	124	124	124	124	124	124	124	124	124
Jorhat Provincial State	32	32	32	32	30	32	32	32	32	32
Jubbulpore-Gondia*	245	250	250	275	275	275	276	311	312	312
Kalka-Simla	59	59	59	60	60	60	60	60	60	60
Kohat-Thal	92	92	62	62	62	62	62	62	62	62
Lucknow-Bareilly*	237	237	237	237	237	258	296	298	313	313
Madras and Southern Mahratta*	2,644	2,647	2,543	2,546	2,553	2,553	2,553	2,553	2,552	2,568
Morappur-Dharmapuri*	19	19	19	19	19	19	19	74	(a) 74	(a) 74
Mysore*	296	296	296	296	296	296	296	296	296	296
Nagda-Muttra*	..	101	137	339	339	339	..	..	..	..
Nagpur Chhindwara*	..	..	..	..	..	51	51	98	94	94
Total	..	..	..	..	..	..	..	..	..	..

* Worked by a Company. † Amalgamated with Eastern Bengal Railway. ‡ Now worked by Great Indian Peninsula Railway.
§ These are the latest figures published in 1915. (a) Now called Morappur-Hosur.

‡ Mileage of Railway Lines in India open for Traffic at end of year—*contd.*

Railways.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913-14.	1914-15.	1915-16.
STATE LINES—*contd.*										
Nilgiri*	17	17	29	29	29	29	29	29	29	29
North-Western	3,378	3,430	3,463	3,568	3,570	3,656	3,650	3,710	3,709	3,758
Nowshera-Durgai	40	40	40	40	40	40	40	40	40	40
Oudh and Rohilkhand	1,213	1,223	1,223	1,231	1,327	1,434	1,524	1,525	1,526	1,527
Palanpur-Deesa*	17	17	17	17	17	17	17	17	17	17
Purulia-Ranchi*	..	72	72	73	73	73	73	115	115	115
Raipur-Dhamtari*	57	57	57	57	57	57	57	57	57	57
Rajputana-Malwa*	1,774	1,778	1,778	1,778	1,778	1,778	†	†	†	†
South Indian*	1,186	1,207	1,323	1,323	1,323	1,323	1,323	1,326	1,327	1,327
Southern Shan States	..	..	..	..	..	..	16	23	70	70
Tinnevelly-Quilon*	50	50	50	50	50	50	50	50	50	50
Tirhoot*	614	764	775	775	776	769	792	788	788	826
Tirupattur-Krishnagiri*	25	25	25	25	25	25	25	25	25	25
Trans Indus (Kalabagh-Bannu) *	..	..	..	..	..	..	..	89	89	89
ASSISTED COMPANIES.										
Ahmedabad-Dholka	33	33	33	33	33	33	33	34	34	34
Ahmedabad-Parantij	55	55	55	55	55	89	89	89	89	89
Amritsar-Patti	28	28	28	28	54	54	54	54	54	54
Arrah-Sasaram Light	..	..	..	..	..	61	61	60	65	65
Bakhtiarpur-Behar Light	18	18	18	28	28	33	33	33	33	33
Baraset-Basirhat Light	26	26	26	35	51	51	51	51	52	52
Barsi Light	79	79	79	79	79	116	116	116	116	117
Bengal and North Western	932	1,015	1,017	1,092	1,117	1,176	1,177	1,240	1,239	1,241
Bengal Dooars	153	153	153	153	153	153	153	153	153	153
Bezwada-Masulipatam	..	..	49	52	52	52	52	52	52	52
Bowringpet-Kolar	..	..	..	..	..	..	..	11	(*b*)	(*b*)
Champaner-Shivrajpur Light	..	..	..	..	..	20	20	20	26	25
Darjeeling-Himalayan	51	51	51	51	51	51	51	51	51	51
Extension	..	..	..	..	..	..	..	14	54	95
Delhi-Umballa-Kalka	162	162	162	162	192	192	192	192	192	192
Total	..	..	..	..	..	..	..	..	..	..

* Worked by a Company.

† Amalgamated with Bombay, Baroda and Central India Railway.

‡ These are the latest figures published in 1915.

(*b*) Shown under Native State lines against Kolar District Railway.

‡ Mileage of Railway Lines in India open for Traffic at end of year—*contd.*

Railways.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913-14.	1914-15.	1915-16.
ASSISTED COMPANIES—*contd.*										
Dewri-Rohtas Light	..	..	..	..	..	..	..	..	24	24
Deoghur	5	5	5	5	5	†	†	†	†	†
Dhond-Baramati*	..	..	..	..	..	..	..	..	27	27
Dibru-Sadiya	78	78	78	78	86	86	86	86	86	86
Ellichpur-Yeotmal*	..	..	..	..	..	..	..	48	67	117
Godhra-Lunavada	..	..	..	..	..	..	..	24	25	25
Hardwar-Dehra	32	32	32	32	32	32	32	32	32	32
Howrah-Amta	37	37	44	44	44	44	44	44	44	44
Howrah-Sheakhala	20	20	20	20	20	20	20	20	20	20
Jacobabad-Kashmar*	..	..	..	..	..	..	..	..	77	77
Jessore-Jhenidah	..	..	..	..	..	..	..	37	37	37
Jullundar Doab	..	..	..	..	..	..	28	103	133	130
Jullundur-Mukerian *	..	..	..	..	..	..	..	..	45	45
Matheran	..	13	13	13	13	13	13	13	13	13
Mirpur Khas-Jhudo	..	..	..	50	50	50	50	50	50	50
Mirpur Khas-Khadro	..	..	..	..	..	..	50	50	50	50
Mymensingh-Jamulpur-Jagannathganj ...	53	54	54	54	55	55	55	55	55	54
Nadiad-Kapadvanj	..	..	..	..	..	..	..	28	28	28
Powayen Light	40	40	40	40	40	40	40	40	40	40
Rohilkhand and Kumaon	118	171	203	202	202	225	256	256	256	259
Shahdara (Delhi) Saharanpur Light	..	93	93	93	93	93	93	93	93	93
South Behar	79	79	79	79	79	79	79	79	79	79
Southern Punjab	580	575	575	575	576	576	576	576	576	576
Sutlej Valley	..	..	..	..	209	209	209	208	208	208
Tanjore District Board*	103	103	103	103	103	103	103	103	112	112
Tapti Valley	155	155	155	155	155	155	155	155	155	155
Tarkessur	22	22	22	22	22	22	22	22	(*a*)	(*a*)
Tezpur-Balipara	20	20	20	20	20	20	20	20	20	20
Thaton-Duyinzaik Light	8	..	..	..	..	..	..	..	..	..
Total	..	..	..	..	..	..	..	..	..	..

* Worked by a Company. † Amalgamated with East Indian Railway. ‡ These are the latest figures published in 1915.
(*a*) Incorporated with the East Indian Railway on the 1st January 1915.

† Mileage of Railway Lines in India open for Traffic at end of year—*contd.*

Railways.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913-14.	1914-15.	1915-16.
UNASSISTED COMPANIES.										
Bengal Provincial	33	33	33	33	33	33	33	33	33	33
Dehri-Rohtas Light	..	..	..	..	..	24	24	24	(*a*)	(*a*)
Jagadhri Light	..	..	..	..	..	3	3	3	3	3
Ledo and Tikak Margherita Colliery	9	9	9	6	6	6	6	6	6	6
Madaya Light	..	..	..	..	..	..	8	8	8	8
Total	42	42	42	39	39	66	74	74	50	50
NATIVE STATE LINES.										
Bangalore-Chik Ballapur Light	..	..	..	..	..	..	..	..	15	29
Bhavnagar-Gondal-Junagad-Porbandar	334	334	338	338	374	..	..	..	..	..
Bhavnagar	..	..	..	..	..	158†	173	206	206	206
Bhopal-Itarsi*	44	44	44	44	44	44	44	45	45	45
Bhopal-Ujjain*	113	113	113	113	113	113	113	113	113	113
Bikaner	..	..	..	..	..	..	..	470	470	498
Bilimora-Kalamba *	..	..	..	..	..	..	..	..	26	26
Bina-Goona-Baran*	146	146	146	146	146	146	146	146	146	146
Birur-Shimoga*	38	38	38	38	38	38	38	38	38	38
Cooch-Behar	34	34	34	34	33	33	33	33	33	33
Cutch	12	12	36	36	37	37	37	37	37	37
Dholpur-Bari	..	..	20	20	20	20	20	28	37	37
Dhrangadra	21	21	21	21	21	21	21	21	40	43
Gaekwar's Dabhoi*	94	94	94	94	94	94	118	142	142	147
Gaekwar's Mehsana*	93	93	130	138	138	138	138	138	153	153
Gondal-Porbandar	..	..	..	..	..	148†	148	148	148	148
Gwalior Light*	184	184	203	250	250	250	250	250	250	250
Hindupur*	51	51	51	51	51	51	51	51	51	51
Hingoli Branch*	..	..	..	..	..	..	50	50	50	50
Hyderabad-Godavari Valley*	391	391	391	391	391	391	391	391	391	391
Jaipur*	32	73	73	73	73	73	73	73	73	73
Jammu and Kashmir	16	16	16	16	16	16	16	16	16	16
Jamnagar	54	54	54	54	54	54	54	54	54	54
Jetalsar-Rajkot	46	46	46	46	46	46	46	46	46	46
Jodhpur-Bikaner	709	709	709	776	831	910	996	(*b*) 587	(*b*) 604	(*b*) 609

* Worked by a Company.

† These are the latest 4 figures published in 1915.

(*a*) Shown under Assisted Companies.

(*b*) Jodhpur only—figures of Bikaner have been shown separately.

‡ Mileage of Railway Lines in India open for Traffic at end of year—*concluded.*

Railways.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913-14.	1914-15.	1915-16.
NATIVE STATE LINES—*contd.*										
Junagad	..	..	..	..	..	89†	101	114	114	121
Khanpur-Chachran*	..	..	..	..	..	22	22	22	22	22
Khijada-Dhari *	..	..	..	..	..	..	..	26	26	26
Kolar District	..	..	..	..	..	..	..	..	11	41
Kolar Gold Fields*	10	10	10	10	10	10	10	10	10	10
Kolahpur*	29	29	29	29	29	29	29	29	29	29
Kosamba-Zankhvav	..	..	..	..	..	..	26	26	26	26
Ludhiana-Dhuri-Jakhal	79	79	79	79	79	79	79	79	79	79
Morvi	94	94	93	93	93	93	93	93	93	93
Mourbhanj*	32	32	32	32	32	32	32	32	32	32
Mysore-Nanjangud*	16	16	16	16	16	16	16	16	16	16
Nagda-Ujjain*	34	34	34	34	34	34	34	34	34	34
Nizam's*	330	330	330	330	330	330	330	330	330	330
Parlakimedi Light*	25	25	25	25	25	25	25	25	25	25
Petlad-Cambay*	34	34	34	34	34	34	34	34	34	34
Petlad-Vaso	..	..	..	..	..	..	..	..	16	19
Pipar Bilara Light	..	..	..	..	..	19	25	25	25	25
Rajpipla*	37	37	37	37	37	37	37	37	37	37
Rajpura-Bhatinda	107	107	107	107	107	107	108	108	108	108
Sangli*	..	5	5	5	5	5	5	5	5	5
Shoranur-Cochin*	65	65	65	65	65	65	65	65	65	65
Tarikere-Narasimharajapur	..	..	..	..	..	..	..	..	12	12
Tinnevelly-Quilon*	58	58	58	58	58	58	58	58	58	58
Udaipur-Chitorgarh	67	67	67	67	67	67	67	67	67	67
Vijapur-Kalol-Kadi*	42	42	42	42	42	42	46	46	46	46
Total ..	3,471	3,517	3,620	3,742	3,852	3,974	4,198	4,364	4,504	4,599
FOREIGN LINES.										
Karaikkal-Peralam*	15	15	15	15	15	15	15	15	15	15
Pondicherry*	8	8	8	8	8	8	8	8	8	8
West of India Portuguese*	51	51	51	51	51	51	51	51	51	51
Total ..	74	74	74	74	74	74	74	74	74	74
Grand Total ..	29,097	30,010	30,576	31,490	32,099	32,839	33,484	34,656	35,285	35,833

* Worked by a Company.

† Formerly worked as part of the Bhavnagar-Gondal-Junagad-Porbandar Railway.

Irrigation.

In the West irrigation is a rare luxury, designed where it exists to increase the productivity of a soil sure of a certain crop under a copious and well distributed rainfall. In great parts of the East, and especially in India, it is a necessity to existence. For in India there are large tracts, such as the deserts of Sind and the South-West Punjab, which are practically rainless; there are others, such as the Deccan plateau, where cultivation is exceedingly precarious, owing to the irregularity of the rainfall and the long intervals when the crops may be exposed to a blazing sun and a dessicating wind; there are some crops, like rice and sugar-cane, which, except in a few highly favoured districts, can only be matured by the aid of irrigation. There are great areas where a single crop, which is called the *kharif*, or rain crop, can in normal years be raised by the unassisted rainfall, but where the second crop, the *rabi* or cold weather crop, is largely dependent on irrigation. Inasmuch as in India sixty-five per cent. of the population is still dependent upon agriculture for the means of livelihood, this brief summary indicates the enormous importance of irrigation to the community.

Its Early History.

It is natural, in such conditions, that irrigation in India should have been practised from time immemorial. In the history and imagery of the East, there is no figure more familiar than the well, with primitive means for raising the water, followed to-day much as they were in Bible days. In the early records of the peoples of India, dating back to many years before the Christian era, there are frequent references to the practice of irrigation. Wells have been in use from time immemorial; most of the innumerable tanks in Southern India have been in use for many generations; the practice of drawing off the flood waters of the Indus and its tributaries by means of small inundation canals has been followed from a very early date; and in the submontane districts of Northern India are still to be found the remains of ancient irrigation channels, which have been buried for centuries in the undergrowth of the forests. But in the direction of constructing large and scientific works for the utilisation of the surplus waters of the great river little was done before the advent of British rule, and they are comparatively of recent date.

The State Intervenes.

Irrigation works in India may be divided into three main heads—wells, tanks and canals. The greatest and the most impressive are the canals, and these may arrest attention first, because they constitute one of the most enduring monuments to British rule. They have in British India been constructed by direct State agency. In the early days of modern irrigation certain works in the Madras Presidency were carried out by a guaranteed company, and the Orissa canal project was commenced through the same agency. Both Companies fell into difficulties, and the system into disfavour; during the Viceroyalty of Lord Lawrence it was decided that all irrigation works which promised a reasonable return on the capital expenditure should be constructed through direct agency and should be constructed by the State from loan funds as productive public works.

The British Inheritance.

The British Government in India inherited a few major irrigation works. One of these was the Grand Anicut—the local term for barrage—stretching across the width of the Cauvery River in Madras. In the Punjab there were a few canals, chiefly inundation—that is above the normal bed of the river and fed from the flood current—constructed by the Muhammedan and Sikh rulers, and owing to its proximity to Delhi, the waters of the Jumna were brought to the neighbourhood of the city by the Mughals. It is doubtful if these works ever irrigated any considerable areas or conferred much benefit on the people, but they suggested the model on which the British engineers worked. In Southern India, Sir Arthur Cotton constructed the upper Anicut across the Coleroon River, so as to secure the full level required for the utilisation of the Grand Anicut across the Cauvery. He also designed the works which, constructed and improved at an outlay of three crores, irrigate more than two million acres in the Godaveri and Kistna deltas. In Northern India Sir Probyn Cautley constructed the great Ganges Canal, which takes off from the river near Hardwar, and which in magnitude and boldness of design has not been surpassed by any irrigation work in India or elsewhere. In this way were laid the foundations of the irrigation system in India. The work was gradually pushed forward. In Northern India a great system of canals was constructed, chiefly in the Punjab and the United Provinces. Some of these, like the great Chenab Canal, ought to be classed amongst the wonders of the world. It irrigates nearly two million acres, or about two-fifths of the cultivable area in Egypt, with an ordinary discharge of eleven thousand cubic feet per second, or about six times that of the Thames at Teddington. The Chenab and the Jhelum Canals brought under irrigation great areas of Government waste, and thereby allowed the system of State colonisation, which relieved the congestion on the older villages of the Punjab, and established colonies of over one million of people on what had been the desolate abode of a handful of nomads. In the Bombay Deccan a few protective works were constructed, like Lake Fife and Lake Whiting, drawing their supplies from the Ghats and spilling them over the arid tracts of the Deccan. In Madras there was completed the boldest and most imaginativ irrigation work in the world; by the device of constructing a reservoir at Periyar, on the outer slopes of the ghats, and carrying the water by means of a tunnel through the intervening hill, the Madras Government turned the river back on its watershed and poured its waters over fertile lands starved by want of moisture. But these Deccan works did not pay. The cultivators would not use the water in years of good rainfall, and there was not enough to go far in seasons of drought; the inevitable result of such conditions was to concentrate attention upon the remunerative works on the rivers of the Punjab, and to leave protective irrigation to wilt for want of funds.

The Irrigation Commission.

In order to substitute policy for spasmodic effort, the Irrigation Commission was appointed by Lord Curzon's Government in 1901. It made a detailed survey of the conditions of the country, and produced the report which is the foundation of Indian Irrigation policy to-day. The figures compiled by the Commission illustrate the progress which had been made up to that period. They showed that out of an area of 226 million acres annually under crop in the irrigating provinces of British India, in round numbers 44 millions acres, or 19½ per cent. were ordinarily irrigated. Of the total area irrigated 18½ million acres or 42 per cent. was watered by State works (canals and tanks), and 25½ million acres, or 58 per cent. from private works, of which rather more than one half was from wells During the previous quarter of a century the area irrigated by Government works had been increased by 8 million acres, or by eighty per cent. and the Commission estimated that during the same period the area under private irrigation had increased by at least three million acres or a total addition to the irrigated area in British India of 11 million acres or 33 per cent. Including the Native States the area under irrigation annually within the British Empire was placed at 53 million acres (19 million from canals, 16 million from wells, 10 million from tanks, and 8 million from other sources). The financial results for works of all classes are shown in the following table :—

Class of Work.	Capital Outlay to end of 1900-01. Lakhs of Rupees.	Interest charges at 4 per cent. on Capital Outlay. Lakhs of Rupees.	Net Revenue in 1900-01. Lakhs of Rupees.	Net Revenue less charges for Interest. Lakhs of Rupees.
Major Works	36,63·72	146·55	259·70	113·15
Minor Works for which capital accounts have been kept.	320·04	12·80	19·18	6·38
Other Minor Works	....	....	87·87	87·87
Total ..	39,83·76	159·35	366·75	207·40

In round numbers the State irrigation works then yielded a net revenue after meeting all charges, including interest, of about two crores of rupees and irrigated annually over nineteen million acres.

The Commission's Programme.

The Commission reported that the field for the construction of new works of any magnitude on which the net revenue would exceed the interest charges was limited, being restricted to the Punjab, Sind and parts of Madras—tracts for the most part not liable to famine. They recommended that works of this class should be constructed as fast as possible, not only because they would be profitable investments, but also because they would increase the food supply of the country. Then addressing themselves to the question of famine protection, they worked out a very interesting equation. Taking the district of Sholapur, in the Bombay Deccan, perhaps the most famine susceptible district in India, they calculated that the cost of famine relief in it was 5 lakhs of rupees a year. From this deduction, and making allowance for the advantage of famine avoidance as compared with famine relief, they said that the State was justified in protecting the land in such a district at a cost of 221 rupees per acre. For the general protection of the Bombay Deccan they recommended canals fed from storage lakes in the Ghats, where the rainfall has never been known to fail even in the driest years. For Madras they recommended the investigation of the old Tungabhadra project, and of a scheme for storage work on the Kistna. They proposed that Government should undertake the construction of protective works for the rice-growing districts of the Central Provinces and the Ken Canal project in Bundelkhand. The Commission further sketched out a rough programme of new major works to be constructed in different parts of India, which would cost not less than 44 crores of rupees and would result in an increase of 6,500,000 acres to the irrigated area. They estimated that the construction of these works would impose a permanent yearly burden of nearly 74 lakhs on the State, through the excess of interest charges on capital cost over the net revenue produced from the works. Against this would have to be set the reduction in the cost of future famines resulting from the construction of the works, which the Commission put at 31 lakhs per annum. The balance of 43 lakhs would represent the net annual cost of the works to the State, or the price to be paid for the protection from famine which the works would afford, and for all other indirect advantages which might be attributed to them.

The New Policy.

The principal effect of the Irrigation Commission's report was to substitute policy for spasmodic effort, and the progress since made has been remarkable. The action taken on the recommendation of the Commission is thus summarised by the Government of India in a recent review :—

Punjab Triple Project.—In the year 1901 a project was submitted to the Government of India for the irrigation of the lower Bari *doab* by means of a canal taking out of the Sutlej river. It was suggested to the Irrigation Commission that it would be more advantageous to carry out this work as an adjunct of a more comprehensive scheme for the irrigation of the Jech and Rechna and lower Bari *doabs*. This scheme relied on the possibility of utilising

the ample surplus waters of the Jhelum river to serve these vast areas, thus leaving the Sutlej and Beas waters free for utilization in the Sutlej valley. Subsequent investigations showed that this idea was feasible and the project consisting of three distinct systems, the Upper Jhelum, the Upper Chenab, and the Lower Bari Doab canals was sanctioned in 1904. It has now been practically completed, and the Upper Jhelum Canal was opened by Lord Hardinge in December 1915. To secure the full benefits of this great work it is anticipated that the storage of the Woolar Lake in Kashmir will have to be increased. The total estimated cost of the combined system is 10¼ crores of rupees.

Sind Sagar Canal.—The Irrigation Commission expressed a hope that it would be possible in the future to undertake the construction of a canal drawing its waters from the Indus for the irrigation of the wide expanse of desert in the Mianwali and Muzaffargarh districts known as the Sind Sagar *doab*. The investigation of the project has been deferred until other far more promising schemes are advanced.

Woolar Lake Storage.—It was suggested to the Commission that the Woolar lake in Kashmir should be converted into a storage reservoir for the purpose of augmenting the water supply of the Triple project. This proposal was however dropped in 1905, because the Government of India were advised that the areas to be served by the Triple Canal system would not require more water than was already available in the rivers from which the canals derived their supplies. It has since been found however, that the dredging operations, by lowering the bed of the lake, have diminished the flow of the Jhelum river at certain periods. It will consequently become necessary to construct a dam across the Jhelum in order to give an adequate supply of water to the several systems dependent on the cold weather supply of the river and the Government of India have recently ordered the preparation of a project for this purpose.

Sutlej Valley Project.—The Commission drew attention to the possibility of increasing irrigation in the Sutlej valley by the construction of weirs on the river so as to give a more assured and regular supply of water in all seasons to the existing British inundation canals in that tract. Subsequent investigations have shown that a more extended system of irrigation is possible by which the Native States of Bahawalpur and Bikanir would also benefit. A preliminary project is now under investigation.

Sind.—The question of converting the network of inundation canals in Sind into perennial channels by means of weirs across the river Indus has been considered at various intervals during the past 50 years. As a result of the investigations that were made a scheme was drawn up for the construction, at a cost of some 7¾ crores, of a barrage at Sukkur with a canal on the left bank which would have been the largest irrigating channel in India. The project as drawn up did not meet with the approval of the technical advisers of the Secretary of State and it is being further investigated by the Bombay Engineers.

Bombay Deccan.—The Chankapur project has been finished; the Godavari canals are approaching completion, while work on the Pravara project is in progress. The Nira Right Bank canal project was sanctioned and commenced in 1912. In respect of size and cost it is the most important irrigation work of the protective class undertaken in India. The work involves the enlargement of the reservoir on Lake Whiting, which feeds the existing left bank canal, so that the capacity of the reservoir will be increased from 5,300 to 24,300 million cubic feet. A canal 109 miles long will be constructed and the waters will be distributed by 4 branches and 63 distributaries. The work, which is estimated to cost 257 lakhs of rupees and to occupy eleven years in construction, will afford protection to a tract in the Sholapur district which has the reputation of being one of the most liable to famine in the whole of India. Another important protective scheme the Gokak canal has recently been sanctioned by the Secretary of State. It contemplates the protection of some 493,000 acres in the Bijapur and Belgaum districts in British territory and in the Native States of Kolhapur, Mudhol, Jamkhandi, Sangli and Kurundwad at a cost of Rs. 197 lakhs.

Madras.—The Commission recommended the investigation of three very important works for this presidency; *viz.*, the Tungabhadra project, and the Kistna and the Cauvery Reservoir projects. Detailed investigations have shown that the first could not be carried out except at prohibitive cost and the project has accordingly been abandoned. The other two promise to prove productive. The plans and estimates of the Cauvery project, which will involve the construction of the largest dam of its kind in the world, have been approved by the technical advisers of the Government of India. The consideration of the project cannot, however, be further proceeded with until a settlement has been arrived at in respect of the claims of the Mysore Durbar in the waters of the Cauvery River. Plans and estimates for the Kistna Reservoir project have also been prepared and are being revised in the light of certain suggestions made by the Inspector General of Irrigation in India. A project to reclaim Divi Island, a fertile deltaic tract at the mouth of the Kistna, by means of flood banks and to irrigate this area by a pumping installation, which was approved by the Irrigation Commission, has been carried out. The work is now in operation.

United Provinces.—The Commission delineated in rough outline a project for the utilization of the waters of the Sarda river in Oudh for supplementing the supplies of canal systems which derive their water from the Ganges and Jumna rivers. The proposals were thoroughly investigated, and a project estimated to cost some 6½ crores was prepared on the lines suggested by the Commission. In view of certain difficulties inherent in this scheme the Government of the United Provinces has drawn up an alternative project, estimated to cost Rs. 330 lakhs, which is now engaging consideration.

The Commission recommended the investigation of canals from the rivers flowing through Bundelkhand, and the Mirzapore and Allaha-

bad Districts. The investigations have resulted in the execution of the Ken and Dhassan canals, the Dhukwan Reservoir project, and many other smaller schemes. The result is that the trans-Jumna Districts of these Provinces which were previously so liable to famine, are now fairly well protected.

Central Provinces.—A number of small but very useful tanks designed to protect precarious tracts from famine have come into existence as a result of the measures taken on the Commission's recommendation. In addition, three large canal systems known as the Tendufa, the Weinganga and the Mahanadi canals, which will derive their supplies from the rivers after which they have been named, have been sanctioned. The last named has already come into operation.

Irrigation Dues.

The charges for irrigation, whether taken in the form of enhanced land revenue or of occupiers' and owners' rates, vary very much, depending on the kind of crop, the quantity of water required for it and the time when it is required, the quality of the soil, the intensity or constancy of the demand, and the value of irrigation in increasing the outturn. In the immediate vicinity of Poona a rate of Rs. 50 an acre is paid for sugarcane. This is quite an exceptional rate, it obtains over only a limited area, and is made practicable only because the cultivators, by high manuring, can raise a crop valued at nearly eight-hundred rupees an acre. On other parts of the Mutha canal the rate varies from Rs. 40 to Rs. 12, and on other canals in the Bombay Deccan from Rs. 25 to Rs. 10 per acre. In Madras the maximum rate for sugarcane is Rs. 10, and in the Punjab it does not exceed Rs. 8-8. The rate charged for rice varies in Madras from Rs. 5 to 2, and in Bengal from Rs. 2-8 to Rs. 1-8 per acre. In both these provinces irrigation is practically confined to rice; in the Punjab, where this crop is not extensively grown, the rate varies from Rs. 7 to Rs. 3-4 per acre. The ordinary rate in the Punjab for wheat, which is the principal crop, varies from Rs. 4-4 to Rs. 3-12, and for fodder crops from Rs. 3 to 2-8 per acre. The average rate realised from major works for irrigation of all kinds is about Rs. 3-8 per acre, the provincial averages being Rs. 1-9 in Sind and Bengal; Rs. 3-4 in the Punjab; Rs. 4-8 in Madras, the United Provinces and the Bombay Deccan. The charges for irrigation may be taken as varying from 10 to 12 per cent. of the value of the crop, except in Bengal and the Bombay Deccan, where the average is little more than six per cent.

Canals and Navigation.

Twenty years ago a great deal was heard about the desirability of constructing navigation canals, either in conjunction with irrigation, or for transport, pure and simple. The idea is now exploded. It received a certain stimulus from the unprofitable character of Indian railways, and the handsome earnings of the irrigation works; it received its quietus when the railways turned the corner. Broadly speaking it may be said that navigation and irrigation rights clash; navigation *is* not only costly, but it cannot be maintained during the season of short supply, except to the detriment of irrigation. Outside the deltaic tracts of Bengal, Orissa, Madras and Sind, navigable canals will never be of much use for the purpose of inland navigation. There is however considerable scope for connecting canals to improve the facilities for navigation on the great river system of Eastern Bengal. This is a question which is now engaging the attention of the Government.

WELLS AND TANKS.

So far we have dealt only with the great irrigation schemes. They are essentially exotic, the products of British rule; the real eastern instrument is the well. The most recent figures give thirty per cent. of the irrigated area in India as being under wells. Moreover the well is an extremely efficient instrument of irrigation. When the cultivator has to raise every drop of water which he uses from a varying depth, he is more careful in the use of it; well water exerts at least three times as much duty as canal water. Again, owing to the cost of lifting, it is generally used for high grade crops. It is estimated that well-irrigated lands produce at least one-third more than canal-watered lands. Although the huge areas brought under cultivation by a single canal scheme tend to reduce the disproportion between the two systems, it must be remembered that the spread of canals increases the possibilities of well irrigation by adding, through seepage, to the store of subsoil water and raising the level.

Varieties of Wells.

Wells in India are of every possible description. They may be just holes in the ground, sunk to subsoil level, used for a year or two and then allowed to fall into decay. These are temporary or kacha wells or they may be lined with timber, or with brick or stone. They vary from the kacha well costing a few rupees, to the masonry well, which will run into thousands, or in the sandy wastes of Bikanir, where the water level is three hundred feet below the surface, to still more. The means of raising the water vary in equal degree. There is the *picottah*, or weighted lever, raising a bucket at the end of a pivoted pole, just as is done on the banks of the Nile. This is rarely used for lifts beyond fifteen feet. For greater lifts bullock power is invariably used. This is generally harnessed to the *mot*, or leather bag, which is passed over a pulley overhanging the well, then raised by bullocks who walk down a ramp of a length approximating to the depth of the well. Sometimes the *mot* is just a leather bag, more often it is a *self-acting* arrangement, which discharges the water into a sump automatically on reaching the surface. By this means from thirty to forty gallons of water are raised at a time, and in its simplicity, and the ease with which the apparatus can be constructed and repaired by village labour, the *mot* is unsurpassed in efficiency. There is also the

Persian wheel, an endless chain of earthenware pots running round a wheel. Recently attempts have been made, particularly in Madras, to substitute mechanical power, furnished by oil engines, for the bullock. This has been found economical where the water supply is sufficiently large, especially where two or three wells can be linked. Government have systematically encouraged well irrigation by advancing funds for the purpose and exempting wellwatered lands from extra assessment due to improvement. These advances, termed *takavi*, are freely made to approved applicants, the general rate of interest being 6½ per cent. In Madras and Bombay ryots who construct wells, or other works of agricultural improvement, are exempt from enhanced assessment on that account. In other provinces the exemption lasts for specific periods, the term generally being long enough to recoup the owner the capital sunk.

Tanks.

Next to the well, the indigenous instrument of irrigation is the tank. The village or the roadside tank is one of the most conspicuous features in the Indian scene. The Indian tank may be any size. It may vary from a great work like Lakes Fife and Whiting in the Bombay Presidency or the Periyar Lake in Travancore, holding up from four to seven billion cubic feet of water, and spreading their waters through great chains of canal, to the little village tank irrigating ten acres. They date back to a very early stage in Indian civilisation. Some of these works in Madras are of great size, holding from three to four billion cubic feet, with water spreads of nine miles. The inscriptions of two large tanks in the Chingleput district of Madras, which still irrigate from two to four thousand acres are said to be over 1,100 years old. Tank irrigation is practically unknown in the Punjab and in Sind, but it is found in some form or other in all other provinces, including Burma, and finds its highest development in Madras. In the ryotwari tracts of Bombay and Madras all but the smallest tanks are controlled by Government. In the zemindari tracts only the large tanks are State works. According to the latest figures the area irrigated from tanks is about eight million acres, but in many cases the supply is extremely precarious. So far from tanks being a refuge in famine they are often quite useless inasmuch as the rainfall does not suffice to fill them and they remain dry throughout the season.

CANAL COLONIES.

The canal colonies represent the extreme case of improvement in agricultural conditions effected by irrigation. In the Punjab uplands now watered by the Lower Chenab and Lower Jhelum Canals, irrigation has completely altered the face of the country, so that it supports in unparalleled prosperity a population numbering a hundred to every one of its former poverty-stricken denizens, while land once refused as a gift sells with ease at £15 an acre. The largest of the canal colonies, the Chenab Colony, on the Lower Chenab Canal, lies in the Rechna Doab, between the Chenab and Ravi Rivers, and has a total area of some 3,900 square miles. This area was until 1892 sparsely inhabited by nomad pastoral tribes, whose total numbers were estimated at less than 70,000. Cultivation was rendered possible only by the construction of the Chenab Canal. As fast as the canal and its distributaries were constructed, the land (which was waste and owned by Government) was allotted to various classes of grantees, the bulk of the grants being made to immigrant peasants, including men from the best agricultural districts in the Province. Since its foundation the colony has enjoyed remarkable prosperity. The nomads to whom a large portion of the land was allotted, though without any previous knowledge of agriculture, assimilated the practices of their new neighbours with extraordinary success, and the whole colony is now as well cultivated as almost any part of India.

The Jhelum Canal Colony, on the Lower Jhelum Canal, occupies some 900 square miles of State land in the Shahpur District, and is a more recent development. Colonisation began in 1902, and was conducted on lines similar to those adopted in the Chenab Colony, but a large proportion of the grants were made on the condition that a suitable mare should be maintained for breeding purposes.

The Chunian Colony, a much smaller colony on the Bari Doab Canal in the Lahore District dating from 1897, was returned in 1912 as having a total allottable area of less than 130 square miles, of which practically the whole had been allotted. The population was 16,458 in 1901 and 43,494 in 1911.

Other old canal Colonies in the Punjab such as the Sohag-Para Colony in the Montgomery district, and the Sidhnai Colony in the Mooltan district, had by the beginning of the period under review reached their full development and become merged in the surrounding districts. Before the end of the decade colonisation in the newer colonies also had been practically completed, and their administration had been almost completely assimilated to that of ordinary districts.

Colonisation has also been carried out on a considerable scale since 1901 on the Jamrao, Nasrat, and Dad Canals in Sind.

Schemes for colonisation on the canals included in the Punjab Triple Canal Project, the Upper Jhelum, the Upper Chenab and the Lower Bari Doab are now in progress have been prepared.

A concession of some importance was made to peasant colonists in the Punjab in 1910, when it was decided to allow them to purchase proprietary rights, on very favourable terms, in all colonies except the Jhelum Colony. The concession was made possible by the passing of the Alienation of Land Act, which secures in another way the result that the former res-

triction of the peasant's right to an inalienable right of occupancy was intended to achieve.

In the last Administration Report for the Punjab, the condition of these colonies is thus described:—During the year under review sanction was given to the schemes for the colonisation of the areas commanded by the Lower Bari Doab Canal and the Upper Jhelum Canal, and a new stage in colony history may be said to have commenced. Questions of allotment and arrangements for settling the new colonists once more came into prominence. Progress was delayed on the Lower Bari Doab owing to the damage done by the floods to the Upper Jhelum Canal Head-Works. Still 146, 156 acres were allotted. The area reserved for Military grantees was increased from 103,000 to 178,000 acres in order to make more liberal provision for services in the present war and it is believed that this measure has had considerable effect in stimulating recruiting in the Province.

A particular feature of the Lower Bari Doab Colonisation scheme is the number of special grants of considerable areas for such purposes as horse breeding, cattle breeding, cotton farming and steam ploughing. The excellent start made by Captain Vanrenen on his horse breeding grant is a hopeful augury for future success. The conditions of the horse and mule breeding grants in the Jhelum and Chenab Colonies are now more carefully observed. It was only found necessary to confiscate one such grant during the year. Colonists continue to avail themselves freely of the right to purchase. In Lyallpur nearly 10,000 acres were sold by the recent purchasers. The average price was Rs. 167 per acre for land which was purchased from Government at Rs. 12-8-0 in the case of peasant, and Rs. 20-10-0 in the case of other grantees. The fact that in spite of the large profits obtainable transfers were not more frequent than they were, is strong evidence of the attractions of the colony. The re-assessments of the Chenab Colony were successfully completed during the year, and the fictitious agitation of 1913 appears to have completely subsided.

The activity of the various colony towns in providing drainage and water-supply schemes and in improving sanitation generally is creditable to them. It was decided to offer free sites in the proposed Mandis in new colony towns to persons willing to construct grain elevators.

PRESENT POSITION OF IRRIGATION.

During the year 1915–16 the total area irrigated by all the productive public works, excluding branches in Native States of the Punjab, amounted to 16,639,600 acres. Towards this total the Punjab canals contributed 7·3 million acres, Madras 3·5, the United Provinces 3 and Sind 1·4 million acres. In Bihar and Orissa an area of 815,900 acres was attained. The return on capital is highest in Madras, where the canals yielded 13·55 per cent, excluding the Kurnool and Barur systems referred to in paragraph 2, expenditure on which is charged to Revenue. The next province in this respect is the Punjab, where a return of 10·90 per cent was realised. In the United Provinces and Sind the returns realised were 8·34 per cent and 7·29 per cent, respectively. Details regarding other provinces and administrations will be found in Statement I. The return of productive works as a whole, excluding those under construction and not earning revenue, was 8·14 per cent on the capital outlay.

Protective Works—There were in operation in 1915–16 33 protective works, which together irrigated a total of 444,400 acres. The most important works are the Ramtek reservoir in the Central Provinces, the Betwa and Ken canals in the United Provinces, the Rushikulya in Madras, and the Nira and Godavari systems in the Bombay Presidency. A number of small but interesting tank works are to be found in the Central Provinces. They were sanctioned as experimental works, in accordance with the recommendations of the Irrigation Commission, in order to test how far the people were willing to resort to irrigation for the maturing of their crops and what water rates they were prepared to pay. The result obtained are gratifying and show that the people are beginning to realise the great advantages of irrigation.

Minor Works—There were 119 works so classed in 1915–16, the majority of which are in Bombay and Madras. Eight are purely navigation works. The net revenue paid by works of this category amounted to Rs. 32,45,206 (excluding navigation canals) or a return of 7·59 per cent on the capital outlay, against 8.39 per cent in the previous year. Nearly all the minor works in Sind return exceptionally high percentages. It is in contemplation to transfer these to the major works class as soon as it is possible to amalgamate them with certain large projects which are in contemplation. The total area served by works of this class was 2,072,000 acres. This figure includes the area shown under Burma, *viz.*, 496,105 acres, which is not under actual irrigation, but represents the area of cultivation on lands reclaimed by river flood embankments.

There are numerous works for which only revenue accounts are maintained. They are credited with a share of the land revenue depending on their maintenance and are debited with all expenditure incurred on construction, extension, improvements and maintenance. During the year reviewed these works irrigated an area of 25 million acres and returned a net revenue of Rs. 35,79,707.

Practically all the works for which neither Capital nor revenue accounts are kept are situated in the Madras Presidency. They consist of some 37,000 tanks and irrigation channels, mainly the former, the improvements and repairs of which are executed by the Public Works Department, except in the case of the smaller works which are maintained by civil officers. The areas irrigated by works of this class in 1915–16 aggregated 3,474,200 acres. The area irrigated in 1914–15 was 3,401,200 acres.

Results of irrigation works in operation.

The following table summarises the results of irrigation works for all India during 1915-16 in comparison with those of the two previous years :—

Class of work.	Capital outlay to end of the year on works in operation.	Gross revenue during the year.	Net revenue during the year.	Percentage of net revenue of capital outlay to end of year.	Net profit during the year, *i.e.*, net revenue less interest charges.	Area irrigated.
	Rs.	Rs.	Rs.	Per cent.	Rs.	Acres.
I.—Productive ..	55,69,45,166	6,66,27,995	4,53,42,324	8·14	2,69,30,150	16,639,600
II.—Protective ..	6,84,62,305	17,87,340	4,50,175	0·66	—17,94,140	444,400
III.—Minor works for which capital and revenue accounts are kept (including works under construction).	6,49,42,877	54,35,485	29,42,609	4·53	14,63,555	2,072,000
IV.—Minor works for which only revenue accounts are kept.	....	68,55,227	35,79,707	....	....	2,514,400
V.—Works for which neither capital nor revenue accounts are kept.	....	1,61,68,768	1,12,95,067	....	....	3,474,200
Total 1915-16 ..	69,03,50,348	9,68,74,815	6,36,09,882	(*a*) 7·06	2,65,99,565	25,144,600
Total 1914-15 ..	64,00,46,560	10,02,80,767	6,26,34,340	(*a*) 7·64	2,84,72,727	25,578,700
Total 1913-14 ..	61,21,21,482	9,46,71,850	6,33,70,373	(*a*) 8·22	....	24,913,400

(*a*) Percentage calculated on works of classes I, II and III.

Expenditure by the State.

The subjoined table exhibits the outlay incurred by the State during the year 1915-16 on all classes of irrigation works :—

	Capital outlay (direct charges).	Minor additions, maintenance, and working expenses (direct charges)
Works under construction.	Rs.	Rs.
Productive	27,33,667	....
Protective	56,50,550	....
Minor	7,78,818	....
Total	91,63,035	....
Works in operation.		
Productive	96,61,803	2,01,25,993*
Protective	17,77,096	12,87,052*
Minor	5,30,552	24,30,106
Total	1,19,69,451	2,38,43,151
Works under classes IV and V	....	81,02,638
Grand Total	2,11,32,486	3,19,45,789

* Inclusive of share of collection charges in the Civil Depts. in Madras, Bombay and Burma.

Value of the Crops.

A comparison of the acreage of crops matured by means of the Government irrigation systems, with the total area under cultivation in the several provinces, is given below :—

Province.	Net area cropped.	Area irrigated by Government irrigation works.	Percentage of irrigated area to total cropped area.	Capital cost of Government irrigation works to end of 1915-16 in lakhs of rupees.	Estimated value of crops raised on areas receiving State irrigation, in lakhs of rupees.
	Acres.	Acres.	Per cent.		
Burma	14,089,000	1,271,000	9·0	212	411
Bengal	24,454,000	109,000	0·4	239	81
Bihar and Orissa ..	8,230,000	878,000	10·6	627	404
United Provinces of Agra and Oudh.	35,633,000	3,244,000	9·1	1,237	1,601
Ajmer-Merwara ..	291,000	19,000	6·5	35	5
Punjab	19,380,000	8,219,000	42·4	2,175	2,751
North-West Frontier .	2,278,000	307,000	13·4	256	143
Sind	3,400,000	3,378,000	99·3	324	800
Bombay Deccan ..	24,113,000	282,000	1·2	486	188
Central Provinces (excluding Berar).	17,083,000	52,000	0·3	171	20
Madras	39,175,000	7,379,000	18·8	1,102	1,868
Baluchistan	22,000	7,000	31·8	39	2
Total ..	188,148,000	25,145,000	13·3	6,903	8,274

Land for Soldiers.

On October 13th, 1915, the Government of India issued, in a more complete form than has hitherto been available, a summary of their colonisation policy, which is of special interest in relation to the provision of land for ex-soldiers. In the course of this they said :—

The older canals left unirrigated the upper portions of the Jech and the Rechna Doabs and the lower parts of the Bari Doab. The canals, the triple project,—the upper Jhelum, the upper Chenab and the lower Bari Doab canals—will bring water to much of the land in the hitherto unwatered portions of these three Doabs. The first and second of the canals, though they will irrigate some 350,000 and 650,000 acres, respectively, give little scope for schemes of colonization as the areas of the Government waste included within the limits of irrigation are comparatively speaking small. On the lower Bari Doab canal, however, the area available for colonization is something like 1,200,000 acres. The bulk of the land, about 750,000 acres (or 30,000 rectangles of 25 acres apiece) is to be given out on terms which will encourage the breeding of horses and mules. About 12,000 rectangles will be distributed, for the most part in grants of one rectangle each, to peasant colonists and ex-soldiers for cultivation. No conditions in regard to horse and mule-breeding will attach to the tenure of these rectangles, but the grantees will be eligible for extra rectangles to which such condition apply. Of these 17,000 rectangles about 7,000 have been set apart for ex-soldiers and for the rest selections have already been made from the peasants of districts lying west of the Sutlej.

Of the remaining 10,000 rectangles 7,000 will constitute the horse and mule-breeding grants. For these the holders of the 17,000 rectangles mentioned above will compete. The land will be given out on ten years' leases on condition that the tenant of each rectangle maintains a mare. A large proportion of the competitors will be military men. The strong military element among the colonists should go a long way to ensure the success of this part of the scheme. Ex-cavalry men, especially, should make first rate breeders. The soldier grantees will be selected by the military authorities, after the war, and will probably be for the most part retired officers and non-commissioned officers.

There are only about 78,000 acres of Government land irrigated by the Upper Chenab Canal and of this 42,000 acres will receive perennial irrigation, whilst the remainder will be irrigated for the khariff harvest only. On the Upper Chenab Canal and on the Upper Jhelum Canal no more than 40,000 acres is available for colonization. Out of this provision has been made up to a maximum of 15,000 acres for reward grants to persons in the Rawalpindi division who rendered assistance to the criminal administration, 5,000 acres are to be given as compensation grants and another 6,000 acres will be kept in reserve for rewards to the army. 6,000 acres have been provided for tenants now holding land on the Lower Jhelum Canal, whom it is desired to remove in order to allow for the extension of certain regimental horse runs. 1,000 acres are desired for special reward grants to military officers, and the balance will provide for grazing grounds and miscellaneous requirements.

Projects under Investigation.

Province.	Name and probable classification of work.		Estimated or approximate direct cost in lakhs of rupees.	Irrigable area in acres.	Districts benefited.	Principal crops that will be produced.
Madras	Cauvery reservoir project ..	Productive	409	363,000	Tanjore	Rice.
	Kistna reservoir project ..	Do.	800	735,000	Kistna and Guntur	
	Velgode project	Do. ..	28	61,000	Kurnool	
	12 smaller schemes ..	Mainly protective.	344	355,000	Ganjam, Nellore, Kurnool, Coimbatore, Anantapur and Salem.	
Bombay ..	Mutha Right Bank canal extension.	Productive ..	175	340,000	Poona	Sugarcane, groundnut, bajri, jowari, wheat, rice, grain, etc.
	Right Bank canal from the tail water of the Bombay Hydro-Electric scheme.	Minor ..	27	13,500	Thana and Kolaba	Sugarcane, garden crops, rabi and hot weather crops.
Sind ..	Rohri canal, Sukkur Barrage and widening of Eastern Nara Supply channel	Productive ..	762*	2,324,000*	The whole of the Left Bank Division comprising three Revenue districts, *viz.*, Nawabshah, Hyderabad and Thar and Parkar.	Cotton, wheat and rice.
	Sultanwah, Begari canal ..	Do. ..	16	177,700	Sukkur and Upper Sind Frontier.	Rice, jowari, bajri, wheat and oil seeds.
Bengal	Damodar canal	Do. ..	40	150,000	Burdwan	Rice.
Bihar and Orissa ..	Extension of the Tribeni canal.	Protective ..	16	50,000	Champaran	Do.
	Karamnasa project ..	Do. ..	7	30,000	Shahabad	Do.
	Kiul River scheme ..	Productive ..	55	13,000	Monghyr	Do.

* An estimate including a Right bank canal also is under preparation. It is expected to cost about 400 lakhs of rupees and the cultivable area will be about 1,500,000 acres.

Projects under Investigation—*contd.*

Province.	Name and probable classification of work.		Estimated or approximate direct cost in lakhs of rupees.	Irrigable area in acres.	Districts benefited.	Principal crops that will be produced.
United Provinces	Belan canal	Protective ..	15	305,000	Khairagarh Pargana, Allahabad district.	Rice and wheat.
United Provinces and Punjab.	Sarda-Ganges, Jumna Feeders projects.	Productive ..	646	1,524,000	*In the United Provinces—* Rampur State, Pilibhit, Shahjahanpur, Hardoi, Bareilly, Moradabad, Budaun, Saharanpur, Muzaffarnagar, Meerut, Bulandshahr, Aligarh, Muthra, Agra, Etah, Mainpuri, Farukhabad, Etawah, Cawnpore, Fatehpore and Allahabad. *In the Punjab—* Gurgaon, Karnal, Delhi, Rohtak, Hissar, Patiala and Jhind States.	All the principal *Rabi* and *Kharif* crops grown in the United Provinces.
Alternative.. ..						
United Provinces ..	Sarda-Kicha Feeder and Sarda canal for Oudh.	Do. ..	721	1,645,000	Pilibhit, Shahjahanpur, Kheri, Bareilly, Hardoi, Lucknow, Unao, Rae Bareilly, Sultanpur, Partabgarh, Sitapur and Bara Banki.	Do.
Punjab	Sutlej Valley project	Do. ..	875	3,000,000	Lahore, Ferozepore, Montgomery, Multan, Bikaneer and Bahawalpur States.	Wheat, gram, jowar and cotton.
Burma	Remodelling the Kinda canal.	Do. ..	15	85,000	Kyaukse	Rice.

Projects under Investigation—*contd.*

Province.	Name and probable classification of work.		Estimated or approximate direct cost, in lakhs of rupees.	Irrigable area in acres.	Districts benefited.	Principal crops, that will be produced.
Central Provinces ..	Pangoli Nalla tank-project now called Bagh tank.	Protective ..	59	75,000	Bhandara	Rice.
	Deena Nadi Tank project .	Do. ..	20	35,000	Chanda	Rice and Sugarcane.
	Uskal & Gangulpara Combined.	Do. ..	13	15,500	Balaghat	Rice.
	Hasdeo river scheme ..	Do. ..	248	455,000	Bilaspur	Rice and sugarcane.
	Bina river scheme ..	Do. ..	37	250,000	Saugor	Wheat, rice and sugarcane.
	Bahoribunda tank project.	Do. ..	10	30,000	Jubbulpore	Rice and wheat.
	Kalimati, now called Chandi tank.	Do. ..	10	12,700	Balaghat	Rice.
	Lower Wainganga canal project.	Do. ..	46	73,000	Bhandara and Chanda ..	Rice.
	Kanhan canal scheme ..	Do. ..	140	375,000	Nagpur, Bhandara and Chanda.	Rice, wheat and sugarcane.
	Pench river scheme ..	Do. ..	68	....	....	Proposed to feed Kanhan canal and Ramtek reservoir.
	Kharung tank project ..	Do. ..	24	80,000	Bilaspur	Rice.
Baluchistan ..	Anambar reservoir project.	Productive ..	32	80,000	Loralai	Wheat and barley.
	Torwal reservoir project ..	Do. ..	18	44,000	Do.	Wheat, barley and jowari.
	Gamboli reservoir project.	Do. ..	60	218,000	Sibi	Wheat and barley.
	Zhob project	Do. ..	63	209,964	Zhob	Wheat, barley and jowari.
		Total ..	5,084 to 5,159	11,204.864 to 11,325,864		

In the following statement is shown the capital outlay incurred on irrigation works during the decade 1906-07 to 1915-16.

Province or Administration.	1906-07.	1907-08.	1908-09.	1909-10.	1910-11.	1911-12.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Bombay	7,05,986	15,23,692	20,16,804	27,72,383	24,79,153	27,00,526
Madras	24,69,512	15,43,792	13,53,843	11,50,966	9,34,252	5,82,289
Bengal	11,61,814	12,13,985	11,97,681	17,84,404	12,00,685	10,44,717
Bihar and Orissa* ..	..	..	..	..	..	..
Punjab	72,88,678	86,64,531	1,02,57,971	1,10,56,057	1,26,63,781	1,60,44,967
United Provinces ..	36,43,342	33,12,516	24,55,562	19,84,273	21,21,137	20,61,315
Burma	12,76,074	11,75,858	16,18,944	12,24,280	12,15,875	20,01,044
Baluchistan ..	20,019	28,991	2,84,162	2,44,874	3,26,315	2,44,621
Rajputana	80,735	59,038	7,289	6,031	25,418	841
North-West Frontier Province.	4,73,378	6,20,233	13,13,930	16,81,198	21,45,656	30,38,842
Central Provinces ..	7,55,696	10,18,187	14,34,997	14,18,129	10,06,324	18,62,690
Total ..	1,78,75,234	1,91,60,823	2,19,10,583	2,33,22,595	2,41,18,596	2,95,81,852

Province or Administration.	1912-13.	1913-14.	1914-15.	1915-16.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.
Bombay	28,37,827	44,05,285	49,83,138	41,13,656	2,85,37,950
Madras	7,59,593	9,47,103	14,11,503	14,29,719	1,25,81,819
Bengal	1,00,960	2,07,238	7,10,613	3,20,770	89,42,867
Bihar and Orissa* ..	7,13,504	6,20,301	2,42,052	66,077	16,41,934
Punjab	1,28,26,643	99,17,267	75,55,469	46,64,241	10,09,39,605
United Provinces ..	22,17,210	28,78,986	26,30,626	26,61,032	2,59,85,999
Burma	26,54,375	19,35,321	17,00,954	14,28,407	1,62,91,132
Baluchistan	2,83,950	3,20,108	1,85,863	1,74,365	20,63,268
Rajputana	7,909	—7,163	5,343	178	1,85,619
North-West Frontier Province	30,58,256	34,63,326	26,35,097	13,96,430	1,98,26,346
Central Provinces ..	26,82,287	44,54,263	51,15,374	48,77,611	2,46,25,558
Total ..	2,81,42,014	2,91,42,035	2,72,35,879	2,11,32,486	24,16,22,097

* Figures for Bihar and Orissa included under Bengal up to the year 1911-12.

BUILDINGS AND ROADS.

The Buildings and Roads branch of the Public Works Department embraces all the operations of the Department which are not classed under the special heads of Railways and Irrigation. It includes the extension and maintenance of the road system, the construction and repair of all the buildings required for the proper discharge of the functions of government in all its branches, and a large miscellaneous class of works of public improvement, including lighthouses, harbours, embankments, boat bridges, and ferries, and the water supply and sanitation of towns.

The operations of this branch of the Department are classed primarily under the head of Civil Works, the expenditure on which is chiefly met from provincial resources. The classification of this expenditure for 1914-15 under the various heads is shown in the following table :—

	Central Provinces and Berar.	Burma.	Assam.	Bengal.	Bihar and Orissa.	United Provinces of Agra and Oudh.	Punjab.	North-West Frontier Province.	Madras.	Bombay.	India General.	Total.
	£	£	£	£	£	£	£	£	£	£	£	£
Imperial	72,050	49,661	2,533	89,409	26,255	74,920	37,148	208,198	36,842	80,536	230,674	908,226
Provincial*	529,551	775,734	364,270	831,581	664,327	507,741	610,853	..	1,086,986	756,747	..	6,127,790
Total ..	601,601	825,395	366,803	920,990	690,582	582,661	648,001	208,198	1,123,828	837,283	230,674	7,036,016

* Includes expenditure by the Civil Department in addition to that by the Public Works Department.

Expenditure by Civil Officers from Imperial Funds ..	£	52,995
Expenditure in England	£	87,739
Grand Total	£	7,176,750

The extension of local Government in India has thrown a large portion of the smaller class of public works into the hands of the local Boards. Speaking generally, the boards maintain their own establishments, but in the case of any works of unusual difficulty they have recourse to the professional skill of the Public Works Officers.

Posts and Telegraphs.

POST OFFICE.

The control of the Posts and Telegraphs of India is vested in an officer designated Director-General of Posts and Telegraphs who works in subordination to the Government of India in the Department of Commerce and Industry. The superior staff of the Direction, in addition to the Director-General himself, consists on the postal side of two Deputy Directors-General (who are officers of the rank of Postmaster-General), four Assistant Directors-General (whose status is similar to that of Deputy Postmasters-General), and two Personal Assistants (who are selected from the staff of Superintendents).

For postal purposes, the Indian Empire is divided into eight circles as shown below, each in charge of a Postmaster-General :—Bengal and Assam, Bihar and Orissa, Bombay, Burma, Central, Madras, Punjab and North-West Frontier, and United Provinces. The Central Circle comprises roughly the Central Provinces and the Central India and Rajputana Agencies.

The Postmasters-General are responsible to the Director-General for the whole of the postal arrangements in their respective circles, with the exception of those connected with the conveyance of mails by railways and inland steamers which are entrusted to four officers bearing the designation of Inspector-General, Railway Mail Service and Sorting. All the Postmasters-General are provided with Personal Assistants, while those in charge of the largest circles are also assisted by Deputy Postmasters-General. The eight Postal Circles and the jurisdictions of the four Inspectors-General are divided into Divisions each in charge of a Superintendent; and each Superintendent is assisted by a certain number of officials styled Inspectors or Assistant Superintendents.

Generally there is a head post office at the head-quarters of each revenue district and other post offices in the same district are usually subordinate to the head office for purposes of accounts. The Postmasters of the Calcutta, Bombay, and Madras General Post Offices and of the larger of the other head post offices are directly under the Postmaster-General and the least of them exercises the same powers as a Superintendent of Post Offices in respect of inspections, appointments, leave and punishments. The Presidency Postmasters, indeed, have one or more Superintendents subordinate to them. When the duties of the Postmaster of a head office become so onerous that he is unable to perform them fully himself, a Deputy Postmaster is appointed to relieve him of some of them, and if still further relief is required, one or more Assistant Postmasters are employed. The more important of the offices subordinate to the head office are designated sub-offices and are usually established only in towns of some importance. Sub-offices transact all classes of postal business with the public, submit accounts to the head offices to which they are subordinate, incorporating therein the accounts of their branch offices, and frequently have direct dealings with Government local sub-treasuries. The officer in charge of such an office works it either single-handed or with the assistance of one or more clerks according to the amount of business.

Branch offices are small offices with limited functions ordinarily intended for villages, and are placed in charge either of departmental officers on small pay or of extraneous agents, such as school-masters, shopkeepers, landholders or cultivators who perform their postal duties in return for a small remuneration.

The audit work of the Post Office is entrusted to the Accountant-General, Posts and Telegraphs, who is an officer of the Finance Department of the Government of India and is not subordinate to the Director-General. The Accountant-General is assisted by Deputy Accountants-General, all of whom, with the necessary staff of clerks, perform at separate headquarters the actual audit work of a certain number of postal circles.

In accordance with an arrangement which has been in force since 1883, a large number of sub-post offices and a few head offices perform telegraph work in addition to their postal work and are known by the name of combined offices. The policy is to increase telegraph facilities everywhere and especially in towns by opening a number of cheap telegraph offices working under the control of the Post Office. The telegraph expenditure on account of these combined offices is borne by the Telegraph Department to which the whole of their telegraph revenue is also credited.

The **Inland Tariff** (which is applicable to Ceylon and Portuguese India except as indicated below) is as follows :—

	When the postage is prepaid.	When the postage is wholly unpaid.	When the postage is insufficiently prepaid.
Letters.	Anna.		
Not exceeding 1 tola	½	Double the prepaid rate (chargeable on delivery).	Double the deficiency (chargeable on delivery).
Exceeding 1 tola but not exceeding 10 tolas	1		
Every additional 10 tolas or part of that weight	1		
Book and pattern packets.			
Every 10 tolas or part of that weight..	½		

Postcards.

Single .. .. .. ½ anna.
Reply .. .. .. ½ „

(The postage on cards of private manufacture must be prepaid in full.)

Parcels (prepayment compulsory).

		Rs.	a.
	Every 40 tolas or part of that weight up to 440 tolas	0	2
Registration compulsory.	Exceeding 440 tolas but not exceeding 480 tolas	3	0
	Every additional 40 tolas or part of that weight up to 800 tolas	0	4

These rates are not applicable to parcels for Portuguese India).

Registration fee.

For each letter, postcard, book or pattern packet, or parcel to be registered	0	2

Ordinary Money Order fees.

On any sum not exceeding Rs. 5	0	1
On any sum exceeding Rs. 5 but not exceeding Rs. 10	0	2
On any sum exceeding Rs. 10 but not exceeding Rs. 15	0	3
On any sum exceeding Rs. 15 but not exceeding Rs. 25	0	4
On any sum exceeding Rs. 25 up to Rs. 600	0	4

for each complete sum of Rs. 25, and 4 annas for the remainder; provided that, if the remainder does not exceed Rs. 5, the charge for it shall be only 1 anna; if it does not exceed Rs. 10, the charge for it shall be only 2 annas and if it does not exceed Rs. 15, the charge for it shall be only 3 annas.

Telegraphic money order fees.—The same as the fees for ordinary money orders *plus* a telegraph charge calculated at the rates for inland telegrams for the actual number of words used in the telegram advising the remittance, according as the telegram is to be sent as an "Express" or as an "Ordinary" message.

In the case of Ceylon the telegraph charge is at the rate of Re. 1 for the first 12 words and 2 annas for each additional word. Telegraphic money orders cannot be sent to Portuguese India.

Value-payable fees.—These are calculated on the amount specified for remittance to the sender and are the same as the fees for ordinary money orders.

Insurance fees.—For every Rs. 50 of insured value 1 anna.

As regards Ceylon and Portuguese India see Foreign Tariff.

Acknowledgment fee.—For each registered article 1 anna.

The Foreign Tariff (which is not applicable to Ceylon except in respect of insurance fees or to Portuguese India except in respect of insurance fees and parcel postage) is as follows:—

Letters.

To the United Kingdom, other British Possessions and Egypt, including the Soudan.	One anna for each ounce or part of that weight.
To other countries, colonies or places.	2½ annas for the first ounce and 1½ annas for every additional ounce or part of that weight.

Postcards Single .. .. .. 1 anna.
„ Reply .. .. .. 2 annas.

Printed Papers.—½ anna for every 2 ounces or part of that weight.

Business Papers.—½ anna for every 2 ounces or part of that weight, subject to a minimum charge of 2½ annas for each packet.

Samples.—½ anna for every 2 ounces or part of that weight, subject to a minimum charge of 1 anna for each packet.

(The rates shown above are those chargeable when the postage is prepaid.)

Parcels.—(Prepayment compulsory.) The rates vary with the countries to which they are addressed. The rates to the United Kingdom are—

	Via Gibraltar. Rs. a. p.	Overland. Rs. a. p.
Not over 3 lbs.	0 12 0	1 8 0
„ „ 7 „	1 8 0	2 4 0
„ „ 11 „	2 4 0	3 0 0

Registration fee.—2 annas for each letter, postcard, or packet.

Money Orders.—To countries on which money orders have to be drawn in rupee currency, the rates of commission are the same as in the case of inland money orders.

To countries on which money orders have to be drawn in sterling, the rates are as follows:—

	Annas.
Not exceeding £1	3
Exceeding £1 but not exceeding £2 ..	5
„ £2 „ „ „ £3 ..	8
„ £3 „ „ „ £4 ..	10
„ £4 „ „ „ £5 ..	12
„ £5	12

or each complete sum of £5 and 12 annas for the remainder, provided that if the remainder does not exceed £1, the charge for it shall be 3 annas; if it does not exceed £2, the charge for it shall be 5 annas; if it does not exceed £3, the charge for it shall be 8 annas; and if it does not exceed £4, the charge for it shall be 10 annas.

Insurance fees—

To countries other than those named below ..3 annas for every £5.

To Ceylon and Portuguese India .. ..2 annas for every Rs. 100.

To Mauritius, the Seychelles, Zanzibar, and the British East Africa, Uganda, and Somaliland Protectorates .. ..4 annas for every Rs. 100.

Acknowledgment fee.—2 annas for each registered article.

TELEGRAPH DEPARTMENT.

Telegraphs.—Up to 1912 the telegraph system in India was administered as a separate department by an officer designated Director-General of Telegraphs who worked in subordination to the Government of India in the Department of Commerce and Industry. In that year it was decided to vest the control of Posts and Telegraphs in a single officer as an experimental measure with a view to the eventual amalgamation of the two Departments.

In pursuance of this policy an experimental amalgamation of the two services was introduced in the Bombay and Central Circles from the 1st July 1912. The fundamental principles of this scheme which followed closely the system in force in the United Kingdom and several other European countries were that the traffic and engineering work of the Telegraph Department should be separated, the former branch of work in each Circle being transferred to the Postmaster-General assisted by a Deputy Postmaster-General and a suitable number of attached officers and the engineering branch being controlled by a Director of Telegraphs in charge of the two Circles. Subordinate to this officer there were several Divisional Superintendents who were assisted by a number of attached officers.

In 1914 the complete amalgamation of the two Departments was sanctioned by the Secretary of State and introduced from 1st April. The superior staff of the Direction, in addition to the Director-General himself, consists on the engineering side of a Chief Engineer, Telegraphs, with an Assistant, and a Personal Assistant to the Director-General. For traffic work there are a Deputy Director-General, with an Assistant and an Assistant Director-General. In the Circles the scheme which has been introduced follows closely on the lines of the experimental one referred to above. For telegraph engineering purposes India is divided up into three Circles, each in charge of a Director of Telegraphs. For Burma special arrangements were considered necessary and the engineering work is in charge of the Post Master-General who is a Telegraph officer specially selected for the purpose. These four Circles are divided into twenty Divisions each of which is in charge of a Superintendent of Telegraph Engineering.

The telegraph traffic work is under the control of the Postmasters-General, each of whom is assisted by a Deputy Postmaster-General and a suitable staff of attached officers.

The audit work of the Telegraph Department is, like that of the Post Office, entrusted to the Accountant-General, Posts and Telegraphs, assisted by a staff of Deputy and Assistant Accountants-General.

Inland Tariff.—The tariff for inland telegrams is as follows:—

Private and State.

	Express. Rs. a.	Ordinary. Rs. a.	
Minimum charge ..	1 0	0 8	Address charged for.
Each additional word over 12	0 2	0 ½	

Additional charges.

Minimum for reply-paid telegram ..8 annas.

Acknowledgment of receipt 8

Multiple telegrams, each 100 words or less .. ..4 ,,

Collation .. .. ..One quarter of charge for telegram.

	Rs.
For acceptance of an Express telegram during the hours when an office is closed. If both the offices of origin and destination are closed .	2
If only one of the offices is closed	1

Signalling by flag or semaphore to or from ships—per telegram .. .. ..8 annas.

Boat hire .. .. ..Amount actually necessary

Copies of telegrams, each 100 words or less .. .. ..4 annas.

Press.

	Express.	Ordinary.	
	Rs. a.	Rs. a.	
Minimum charge ...	1 0	0 8	Address free.
Each additional 6 words over 48	0 2	0 1	Address free.

(Ceylon is *not* regarded as "Inland" but Portuguese India is.)

Foreign Tariff.—The charges for foreign telegrams vary with the countries to which they are addressed. The rates per word for private and state telegrams to all countries in Europe except Russia and Turkey are as follows :—

	Private.	State.
	Rs. a.	Rs. a.
Via Turkey	1 6	....
,, Indo	1 4	0 12
,, Eastern	1 4	0 10

Growth Telegraphs.—At the end of 1896-97 there were 48,584 miles of line and 148,404 miles of wire and cable, as compared with 87,480 and 343,487 miles, respectively, on the 31st March 1917. The numbers of departmental telegraph offices were 249 and 194, respectively, while the number of telegraph offices worked by the Post Office rose from 1,314 to 3,332 The increase in the number of paid telegrams dealt with is shown by the following figures :—

		1896-97.	1916-17.
Inland ..	Private ..	3,760,476	14,989,720
	State ..	599,890	1,741,891
	Press ..	26,462	273,040
Foreign ..	Private ..	67,833	1,603,427
	State ..	8,722	84,088
	Press ..	3,601	27,670
		5,077,584	18,719,836

The outturn of the workshops during 1916-17 represented a total value of Rs. 15,05,000. At the end of the year the total staff numbered 10,931. The total capital expenditure up to the close of 1916-17 amounted to Rs. 13,03,12,227. The net revenue for the year was Rs. 71,28,625.

Wireless.—The total number of wireless telegraph stations open for traffic at the end of 1916-17 was nineteen, *viz.*, Port Blair, Rangoon, Diamond Island, Table Island, Victoria Point, Madras, Bombay, Sandheads, Calcutta, Karachi, Delhi, Simla, Allahabad, Lahore, Nagpur, Peshawar, Quetta, Secunderabad and Maymyo.

The traffic of all kinds disposed of by the ten coast stations during the year involved 83,329 signalling operations in them.

Telephones.—On the 31st December 1916 the number of telephone exchanges established by the Department was 226, of which 56 with 5,070 connections were worked departmentally. The number of telephone exchanges established by Telephone Companies was 13 with 12,894 connections.

HALL MARKING OF PLATE.

Various Trades Associations in India have at different times urged upon Government that, in the jewellery and silver trades in India, locally-made goods in gold and silver are often sold in such a way as to constitute a fraud on the public; and that, in order to protect honest traders from unfair competition, it is necessary that a voluntary system of Hall-marking should be adopted. It is stated that the system would not only protect the public, but would raise the standard of workmanship in India, and that although Hall-marking should be voluntary in the first instance, it should be made compulsory eventually.

Objections to the proposal.—Government have so far thought it inexpedient to establish a system of Hall-marking, whether voluntary or compulsory, the main objections to the proposal being:—

(1) That the legislation which would be required to introduce a compulsory system of Hall-marking would be of a character entirely opposed to the economic policy of the Government of India and would be vexatious and restrictive in operation.

(2) That the provisions of a law of this character would be constantly evaded, and that a result of its operation would be the discouragement of trade in British territory and its encouragement in Native States.

(3) That a system such as could be instituted without inordinate cost was not wanted by the great majority of the trade.

(4) That there was a great danger of counterfeiting Hall-marks and their fraudulent application to inferior, spurious, or loaded ware.

(5) That there were only two Assay Offices in India, and under a voluntary system of assay, which could not be universal in its application, it was highly improbable that the fees received would cover the expenses of offices established for the purpose at other places, unless the fees were levied at such a rate as to constitute the imposition of a substantially heavy tax on the wares.

(6) That the outcome of the system would, therefore, be to inflict serious injury on workers in the metals in all places except in towns where the Assay Offices are located; most of these were poor artisans who could not afford the expenses of sending their goods to the Assay Offices, and if they refrained from getting their goods stamped, they would be handicapped in their trade, and would probably have to retire from business in favour of wealthier dealers in large centres.

Trade.

The broad characteristics of the trade of India are familiar to readers of the Indian Year Book. India is chiefly an agricultural country, for sixty-seven per cent. of its people are dependent on agriculture for their means of livelihood. Consequently the prosperity of the country is largely determined by the character of the monsoon rains. An area which grows larger every year is protected by irrigation, and the extension of these works, with the increased resisting power of the people and the growth of manufacturing industry is expected to make the people immune from the shock of such famines as those of 1896-97 and 1899 1900; but many of the irrigation works, such as tanks and wells, depend on the rains, for their replenishment. Consequently the trade of the year is mainly determined by the rains, which decide the export trade and the consequent purchasing power of the people. Another feature which arises from these conditions is that the imports are mainly of manufactured goods and the exports of produce. The imports of manufactures in pre-war days chiefly came from the United Kingdom, whose exporting power has been seriously diminished by the diversion of the energies of the people to the war. A large part of the export in pre-war days went to the Continent of Europe, and that market was closed by the war. On these grounds then the trade conditions of 1916-17 were dominated by the war. It is in the relation of the trade of India to the war that we find the most profitable line of study in considering the history of the past year. The main conclusions are indicated in the annual review of Indian trade, by the Director of Statistics, Mr. G. Findlay Shirras, from which the following article is mainly drawn.

THE TRADE OF THE YEAR.

The value of India's overseas trade in the year ending 31st March 1917, as compared with its immediate predecessor, showed a very noticeable increase. Imports of merchandise increased by over thirteen per cent., exports by twenty-one per cent. and re-exports by nearly sixty per cent. Imports, exports, and re-exports of merchandise were also above the pre-war quinquennial average. The actual value of the trade as compared with that of the two preceding years and the pre-war quinquennium was as follows:—

—	Average of five years 1909-10 to 1913-14.	1914-15.	1915-16.	1916-17.	Increase (+) or decrease (—) in 1916-17 as compared with 1915-16 (per cent.)
IMPORTS.	Rs.	Rs.	Rs.	Rs.	Rs.
Merchandise ..	1,45,84,72,000	1,37,92,00,000	1,31,96,62,000	1,49,62,20,000	+13·4
Gold	32,78,41,000	10,70,36,000	5,24,42,000	13,33,79,000	+154·3
Silver	10,88,26,000	11,06,68,000	6,61,10,000	1,55,96,000	—76·4
Total Imports ..	1.89,51,39,000	1,59,69,9400,0	1,43,84,14,000	1,64,51,95,000	+14·4
EXPORTS.					
Indian Merchandise	2,19,49,73,000	1,77,48,50,000	1,92,53,43,000	2,33,15,36,000	+21·1
Foreign Merchandise (Re-exports) ..	4,61,88,000	4,10,67,000	4,84,59,000	7,73,31,000	+59·6
Gold	3,92,07,000	2,24,94,000	6,39,08,000	6,18,000	—99
Silver	3,67,35,000	1,05,39,000	1,03,50,000	4,87,98,000	+371·5
Total Exports ..	2,31,71,03,000	1,84,89,50,000	2,04,80,60,000	2,45,82,83,000	+20
Total Trade ..	4,21,22,42,000	3,44,59,44,000	3,48,64,74,000	4,10,34,78,000	+17·7

The table shows the declared values of the trade, but owing to the exceptional circumstances brought about by the war, the year's trade cannot be judged by ordinary standards only, and to avoid the effect of the rise in prices (which has greatly swollen the figures), the quantity of each article imported and exported during the year has, as far as practicable, been valued at the prices prevailing in the preceding year. The result shows that, had the level of prices of 1915-16 prevailed, imports would have been valued at nearly Rs. 118 crores instead of Rs. 150 crores, and exports would have been Rs. 203 crores instead of 233 crores. Thus the increase in the import trade on account of higher prices was Rs. 32 crores or 27 per cent. and in the export trade Rs. 30 crores or nearly 15 per cent. It is also possible to estimate how far the trade of the year was affected by a change in volume. By comparing the value of the year's trade, re-calculated at prices of 1915-16, with the actual value of the trade in 1915-16, the decrease in imports on account of the decrease in volume amounted to Rs. 14·5 crores,

and the increase in exports on account of the increase in volume to Rs. 10·8 crores.

Features of the year.—The monsoon was particularly good. It arrived early, it continued late, and its distribution was remarkably uniform. There was therefore ample moisture to mature the autumn crops and to provide a seed-bed for those crops which are harvested in the spring. The winter rains, notwithstanding beneficial showers received in places during February, were much below normal. The crops were generally better than those of 1915-16 except in regard to sugar-cane, and the outturn was above the average of the pre-war quinquennial period, except in regard to cotton, jute and certain oilseeds, *viz.*, rape and mustard.

Prices.—Wholesale prices in the principal markets throughout India showed at the end of March 1917, as compared with March 1916, a fall of three per cent. in food grains, a rise of four per cent. in oilseeds, and a rise of forty-five per cent. in cotton. The average price of raw jute in selected markets at the end of March 1917 was the same as in the corresponding period of the previous year. As compared with the level of prices at the outbreak of war, food grains were 14 per cent. cheaper, oilseeds 19 per cent. and jute 17 per cent while cotton was dearer by 37 per cent. The index number of wholesale prices in Calcutta was 17 per cent. above the level of March 1916, and 44 per cent. above the pre-war level (end of July 1914). The rise was due not to an increase in food grains (cereals and pulses), which were actually six per cent. lower than at the outbreak of war but to imported goods, such as sugar, salt, cotton piece goods and metals, and also in some degree to the rise in the prices of such products, as saltpetre, shellac, indigo, etc. The comparatively small rise in prices since the outbreak of war in India, as compared with the rise in many other countries, is important from the point of view not only of the consumer in India but also of the consumer of Indian products abroad.

Imports and Exports.—Imports rose to a much greater extent than did exports. The average price of 61 articles of import based on the declared values increased 35 per cent. as against the preceding year, while the average price of 50 articles of export rose 14 per cent. The increase in average prices in respect of these articles of import and export as compared with the pre-war year will be seen from the following index numbers:—

	1913-14	1914-15	1915-16	1916-17.
Imports	100	101	126	170
Exports	100	102	103	117

Two additional factors in the year's trade were the famine in tonnage and (in the last quarter of the year) difficulties connected with finance on account of the curtailment of Council Bills. At the close of the year freights, in consequence of this tonnage difficulty, rose to fourteen times their pre-war level. Rates in March 1917, to the United Kingdom, as compared with those in March 1916, were for cotton from Bombay, and wheat from Karachi higher by over 90 per cent., rice and jute freights from Calcutta were higher by 60 per cent., oilseeds freights from Bombay and freights for hides and skins from Madras were higher by over 50 per cent. The rates from Calcutta to Rangoon and the Far East, and from Bombay to Japan also increased, but not to the same extent as did freights to Western ports.

Internal Trade.—The activity of internal trade is illustrated by the favourable returns of rail and river-borne trade, and by the increased railway earnings which were Rs. 69,48 lakhs in 1916-17, as against Rs. 64,18 lakhs in 1915-16. Bankers' Clearing House returns for the five chief ports were Rs. 809 crores in 1916 as against Rs. 563 crores in 1915, and Rs. 650 crores in the pre-war year 1913. The number of joint stock companies registered rose from 127 in 1915-16 to 176 and their authorised capital from Rs. 717 lakhs in 1915-16 to Rs. 17,08 lakhs in 1916-17. Indian textile industries which were probably more prosperous than at any time in their history, took a prominent share in the increases in capital, especially jute mills and cotton mills. Three jute mill companies working in India but incorporated in the United Kingdom with sterling capital were re-incorporated and registered in India with rupee capital under the Indian Companies Act. Tea companies and coal mining companies also accounted for part of the increase. The only noticeable decrease was in the case of railway and tramway companies. The iron and steel industry and also Banks, especially the Exchange Banks, showed good results on the year's working.

THE IMPORT TRADE.

The value of the imports of merchandise amounted to almost Rs. 150 crores or £100 millions sterlings, an increase of 13 per cent. over that of the previous year. This was not only above the annual average of the quinquennial period immediately preceding the war, but also the highest recorded, except for the two pre-war years 1912-13 and 1913-14. The value of imported merchandise stated in the average of quinquennial periods as compared with each of the last five years, was as follows:—

	Rs. (lakhs)
Five years ending 1903-04	78,42
" " " 1908-09	111,85
" " 1913-14 (pre-war year)	145,85
" " " 1916-17	152,76

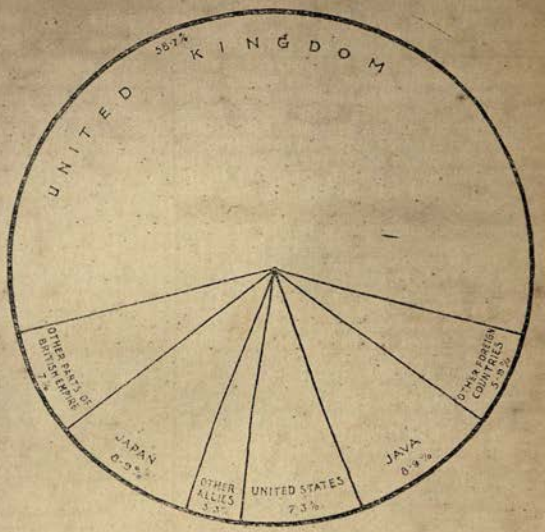
	Rs. (lakhs)
Year 1912-13	161,00
" 1913-14 (pre-war year)	183,25
" 1914-15	137,93
" 1915-16	131,99
" 1916-17	149,62

The main increases, as compared with 1915-16, were in cotton manufactures excluding grey piecegoods, motor cars and cycles, mineral oil other than kerosine, woollen goods, paper and hardware. Cotton manufactures recorded an increase of no less than Rs. 9,79 lakhs, notwithstanding a decrease of Rs. 1,22 lakhs in

1.—The share of principal countries in the import trade in the year ending 31st March 1917, as compared with the average of the five pre war years 1909-10 to 1913-14.

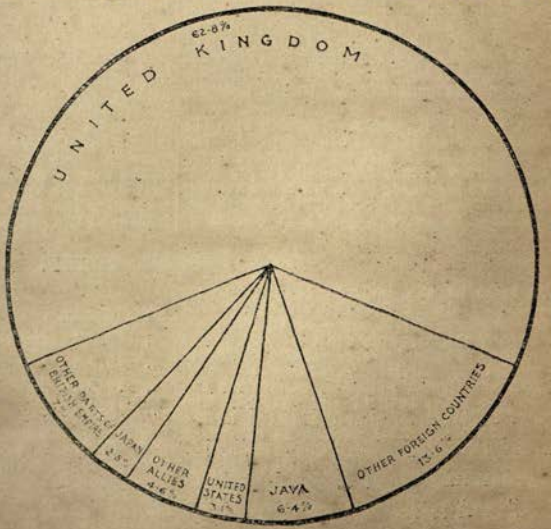
I.—Year ending 31st March 1917.

	Per cent.
British Empire.	65·7
Allies	12·2
United States..	7·3
Other Countries	14·8
	100



II.—Average of the five pre-war years 1909-10 to 1913-14.

	Per cent.
British Empire.	69·8
Allies	7·1
United States..	3·1
Other Countries	20
	100



grey piecegoods, motor cars and cycles Rs. 85 lakhs, paper and pasteboard Rs. 89 lakhs, woollen piecegoods Rs. 78 lakhs, mineral oil, other than kerosene Rs. 75 lakhs, and hardware Rs. 73 lakhs. On the other hand, the most noticeable decreases were in railway plant and rolling-stock, which recorded a decrease of Rs. 2,65 lakhs and sugar of Rs. 1,17 lakhs.

Chief imports.—The chief imports into India were as follows:—

	Annual average of five years 1909-10 to 1913-14.	1915-16.	1916-17.
	Rs.	Rs.	Rs.
Cotton goods	48,40,85,000	39,59,85,000	49,01,57,000
„ yarn	3,77,18,000	3,67,70,000	4,04,89,000
Sugar	13,17,58,000	16,61,78,000	15,45,03,000
Iron and steel	11,17,45,000	9,19,24,000	8,88,06,000
Machinery of all kinds, including belting	5,80,04,000	5,25,71,000	6,01,42,000
Mineral oil	3,72,03,000	4,01,47,000	4,42,61,000
Silk, raw manufactures	3,94,54,000	3,84,18,000	3,94,80,000
Chemicals, drugs, etc.	2,12,73,000	2,87,27,000	3,50,87,000
Hardware	3,17,04,000	2,38,11,000	3,10,87,000
Provisions	2,05,10,000	2,11,27,000	2,80,91,000
Paper and pasteboard	1,27,07,000	1,44,24,000	2,33,10,000
Liquors	2,02,46,000	1,87,34,000	2,33,01,000
Motor cars and cycles	1,00,64,000	1,29,34,000	2,14,41,000
Salt	79,16,000	1,89,61,000	1,91,46,000
Railway plant and rolling-stock	6,10,94,000	4,21,85,000	1,56,86,000

Cotton Manufactures.—The imports of cotton manufactures amounted to Rs. 53 crores as against Rs. 43 crores in the previous year. This increase in value was due almost entirely to the rise in the prices of cotton goods during the year. These imports were 35·5 per cent. of the value of the total imports in 1916-17 as against 35·8 per cent. during the quinquennial period ending with the pre-war year 1913-14.

The imports of yarn declined by 27 per cent. in quantity as compared with those of the previous year. Prices were high, the average declared value rising from 14 annas 7 pies per lb. to Re. 1 and annas 6. Of the total imports of 29½ million lbs. 24¼ million lbs. or nearly 83 per cent. were received from the United Kingdom, and over 4 million lbs.—chiefly of counts Nos. 31 to 40 and also mercerised cotton yarn—from Japan. If a comparison be made with the previous year the share of the United Kingdom in the imports of twist and yarn decreased from 91 per cent. to 83 per cent. and the share of Holland from 2·2 per cent. to less than one per cent., while the share of Japan increased from 1·7 per cent. to 13·6 per cent. In 1916-17 with the exception of coloured goods, all descriptions showed a decrease in the quantity imported. The decrease in grey goods was 26 per cent. and in white piecegoods 3 per cent. Coloured goods showed an increase of 27 per cent.

The imports for the past five years with the average of the two quinquennial periods ending with the years 1908-09 and 1913-14 are given below:—

	Grey (unbleached) millions of yards.	White (bleached) millions of yards.	Coloured printed, dyed millions of yards.
Average of five years ending 1908-09	1,230·7	572·7	515·4
„ „ „ „ „ 1913-14	1,331	654·3	631·5
Year 1912-13	1,535·1	768·7	682·2
„ 1913-14	1,534·2	793·3	831·3
„ 1914-15	1,320·2	604·2	494·8
„ 1915-16	1,148·2	611·4	358·7
„ 1916-17	847	589·8	451·9

Imports of cotton hosiery, chiefly under-vests and similar goods, rose from Rs. 64 lakhs in 1915-16 to Rs. 1,41 lakhs in 1916-17. This was, for hosiery, a record year so far as values go, and meant an increase of 121 per cent. Of the imports 90 per cent. came from Japan and 8 per cent. from the United Kingdom. The share of Japan and the United Kingdom in the previous year was respectively 88 per cent. and 9 per cent.

Sugar.—Imports were on a reduced scale as compared with the previous year and especially with the pre-war year and the pre-war quinquennial average. The imports of beet sugar, never very large in comparison with cane sugar imports, were *nil*. As against 1915-16 the decrease in the value of imported sugar was 7 per cent. but in quantity 15 per cent. If the comparison be made with the pre-war year 1913-14 the quantity decreased by as much as 45 per cent. Nevertheless the total value in 1916-17 on account of the abnormal prices was 3 per cent. above the value of the imports in 1913-14.

Java continued to be the principal source of supply. Of 377,700 tons imported from Java 176,700 tons were imported into Bengal, 107,400 tons into Bombay, 85,100 tons into Sind, 8,100 tons into Madras, and only 400 tons into Burma. Mauritius sugar is imported chiefly into western ports. Of 22,900 tons of Mauritius sugar 15,600 tons or 68 per cent. went to Bombay and only 7,100 tons to Calcutta and 235 tons to Madras. In the pre-war year 1913-14, 131 tons were imported from Japan; in 1916-17 imports from the same source amounted to 11,575 tons. The Indian production of cane sugar was estimated at 2,626,000 tons in 1916-17 on an area of 2,414,000 acres, an increase in outturn of less than one per cent.

Iron and Steel.—The total quantity imported was 257,200 tons or 39 per cent. below that of the previous year, and 65 per cent. below the average of the five pre-war years. The total value of these imports fell from Rs. 9,19 lakhs to Rs. 8,88 lakhs or by 3½ per cent. Prices owing to complete failure of supply to keep pace with demand rose with very great rapidity. On the average of the five years ending with the pre-war year 1913-14 the United Kingdom supplied 60 per cent. of the total imports, the United States of America 3·3 per cent. and the remainder came mainly from Germany and Belgium. In 1916-17 the share of the United Kingdom was 68·7 per cent. and of the United States of America 27·5 per cent.

Machinery and Millwork.—The imports of machinery and millwork in 1916-17 do not afford an adequate means of gauging the prosperity of Indian industry since quantity figures are not given in the returns, and considerable allowance has to be made for the large increase in prices. The year's imports of machinery of all kinds, including belting, increased by 14 per cent. to Rs. 6,01 lakhs. There was, however, a decrease of 27 per cent. as compared with the imports during the pre-war year 1913-14. Cotton mill machinery increased by Rs. 9 lakhs to Rs. 1,29 lakhs. Of this almost nine-tenths were imported into Bombay. Ninety-three per cent. of the imports were received from the United Kingdom, and 5 per cent. from Japan as against 97 per cent. and less than one per cent. respectively in the pre-war year 1913-14.

Mineral Oil.—The imports of mineral oil from foreign countries consist chiefly of kerosine, lubricating oil, and fuel oil. The imports of petrol from abroad are unimportant, Burma being the chief source of supply. The total quantity of foreign mineral oil decrease from 96 million gallons in 1915-16 to nearly 88 million gallons in 1916-17, mainly owing to a great contraction in the imports of kerosine oil from Borneo. The value of the imports rose to Rs. 4,43 lakhs or 10 per cent. on account of the rise in prices.

Hardware.—The principal features in regard to hardware in 1916-17 were (1) the large increase in the import of enamelled ironware: (2) the increase in metal lamps; and (3) the decrease in buckets of tinned or galvanised iron. The total value of the imports of hardware amounted to Rs. 3,11 lakhs, an increase of 31 per cent. over the imports of the previous year. The share of the United Kingdom declined from 66 to 59 per cent., while that of the United States increased from 18 to 19 per cent. and that of Japan from 7 to 16 per cent. The imports of enamelled ironware increased from Rs. 9 lakhs in 1915-16 to nearly Rs. 20 lakhs, owing entirely to larger shipments from Japan. These figures, however, were below the level of the pre-war year, when the imports amounted to Rs. 27 lakhs. Almost two millions of metal lamps valued at Rs. 30 lakhs were imported during the year. Of these 80 per cent. came from the United States and 14 per cent. from Japan. The share of the imports previously held by enemy countries has been taken by these two countries. The imports of cutlery were valued at Rs. 15 lakhs as against nearly Rs. 11 lakhs in the preceding year and over Rs. 28 lakhs in the pre-war year of 1913-14.

The United Kingdom supplied 56 per cent., Japan 23 per cent. and the United States of America 19 per cent. of the imports. The value of electroplated-ware imported was Rs. 4½ lakhs, almost the same as in the preceding year. The principal source of supply was the United Kingdom.

Provisions.—The value of provisions imported amounted to Rs. 2,81 lakhs, an increase of Rs. 70 lakhs on the previous year. Of this increase Rs. 29 lakhs were due to increased quantities and Rs. 41 lakhs to increased prices.

Paper and Pasteboard.—The main characteristic of the year's trade was the increase in the total value which rose by 62 per cent. or Rs. 89 lakhs to Rs. 2,33 lakhs. The imports in the pre-war year (1913-14), it may be noted, were valued at Rs. 1,59 lakhs. Since the outbreak of war the trade in paper has been diverted into new channels.

Liquors.—The quantity of liquors imported decreased, although the value of the imports increased. The total imports of all sorts were 4,458,000 gallons as against 4,826,0000 gallons in the preceding year, and 6,400,000 gallons, the average of the pre-war quinquennium. The

value of these imports was Rs. 2,33 lakhs, an increase of 24 per cent. over that of the previous year.

The production of Indian breweries in 1916 was 4,103,000 gallons, an increase of 62 per cent. as compared with that of the previous year.

Motor Cars and Cycles.—The chief features was the large increase in the imports from the United States, and the decrease in the imports from the United Kingdom, and "other countries" chiefly France and Italy. The year, in short, will be known as the year of the American motor car in India, as it was in South Africa. The following table shows the number of cars imported since the pre-war year 1913-14:—

Number of motor cars imported.

—	From the United Kingdom.	From the United States of America.	From other countries.	Total.
1913-14..	1,669	868	343	2,880
1914-15..	1,350	510	145	2,005
1915-16..	787	2,136	198	3,121
1916-17..	489	4,169	120	4,778

The total imports increased in value to Rs. 1,54 lakhs from Rs. 94 lakhs.

Salt.—The imports of salt were the lowest recorded during the last twelve years, and amounted to only 445,000 tons, valued at Rs. 1,91 lakhs.

Railway Plant and Rolling Stock.—The decrease in the imports of railway plant and rolling stock was remarkable. The total value of the imports on private and Government account fell by 68 per cent. from Rs. 5,69 lakhs in 1915-16 to Rs. 1,81 lakhs.

Woollens.—The quantity of woollen piece-goods imported was nearly double the imports of the preceding year, owing to the increase in the shipments from the United Kingdom. The total quantity imported, however, was less than two-fifths of the pre-war quinquennial average. The imports of **spices** consisted chiefly of betel-nuts. Betel-nuts were valued at Rs. 1,31 lakhs, and were imported mainly from the Straits Settlements and Ceylon. On account of the increased trade with the East African Protectorate and Zanzibar the import of **cloves** increased, while the imports of **pepper** from the Straits in each of the last two years have been double the quantity imported in 1913-14. The increase in **instruments** was especially noticeable in regard to electrical instruments which form the bulk of the trade. The imports of **electric fans**, lamps, wires, cables, etc. increased in value during the year. In **apparel** the imports from France were valued at nearly Rs. 52 lakhs and were higher than the pre-war quinquennial average by Rs. 12 lakhs owing to the larger imports of gold and silver thread which were valued at Rs. 46 lakhs in the year under review. The effects of the war are patent in the imports of **glass and glassware**. The total imports were valued at Rs. 1,50 lakhs. **Imports** from Japan increased more than six times from Rs. 14 lakhs, the pre-war average to Rs. 90 lakhs in 1916-17. The increase in **tobacco** is accounted for by the larger imports of cigarettes and also by a higher level of prices for manufactured tobacco The imports of cigarettes from the United Kingdom reached a record figure, 2,230,000 lbs. out of a total import of 2,403,000 lbs. There were also increases in the imports from the United States, the Straits and Australia. The number of cigarettes imported was approximately 906 millions as compared with 636 millions in the preceding year, and 653 millions the pre-war average. The increase is due in a large degree to the large demands for army purposes. The chief point of interest in connection with the imports of **fruits** and vegetables is the large import of dates which increased to 54,000 tons from 53,000 tons in 1915-16 and 46,000 tons in 1913-14. There was a set-back in the imports of **matches**, 11 million gross being imported against 18 million gross in the preceding year, and nearly 14 million gross in the pre-war year 1913-14. The percentage shares of the United Kingdom, Japan and Sweden in the pre-war year were: 7, 53 and 26 respectively; last year the percentages were 4, 83 and 13. Imports of **dyes** obtained from coal tar amounted to over one million lbs. valued at Rs. 65 lakhs against 716,000 lbs. valued at Rs. 17 lakhs in 1915-16. The quantity imported exceeded that of last year by 50 per cent., but it was only one-fifteenth of the average quantity imported in the pre-war quinquennial period. 330,200 lbs. of alizarine dyes were imported almost entirely from the United Kingdom, while of nearly 782,000 lbs. of the aniline group, 268,000 lbs. were received from the United Kingdom and 372,000 lbs. from the United States of America. This is a record shipment from the United States as only 2,400 lbs. were received in 1915-16 and 200 lbs. in 1913-14. For the first time imports to the extent of 21,000 lbs. were received from Japan. The imports of synthetic indigo were nominal and amounted to nearly 6,400 lbs. of which 2,700 lbs. came from Japan.

THE EXPORT TRADE.

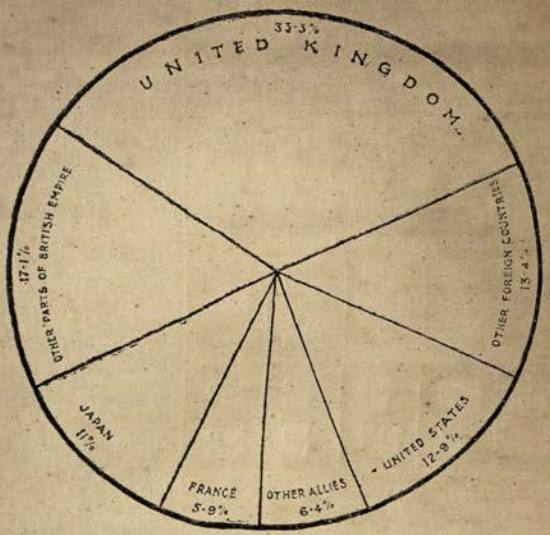
The increase in exports which marked the year 1915-16 was followed by a further and a much larger increase in the year under review. Exports of Indian merchandise amounted to over Rs. 233 crores or £155 million sterling, and increase of 21 per cent. over the preceding year. The course of the trade in the last two decades was briefly as follows:—

	Rs. (lakhs
Five years ending 1903-04	121,31
,, ,, ,, 1908-09	161,84
,, ,, ,, 1913-14 (pre-war year)	219,50
,, ,, ,, 1916-17	217,74

2.—The share of principal countries in the export trade in the year ending 31st March 1917, as compared with the average of the five pre-war years 1909-10 to 1913-14.

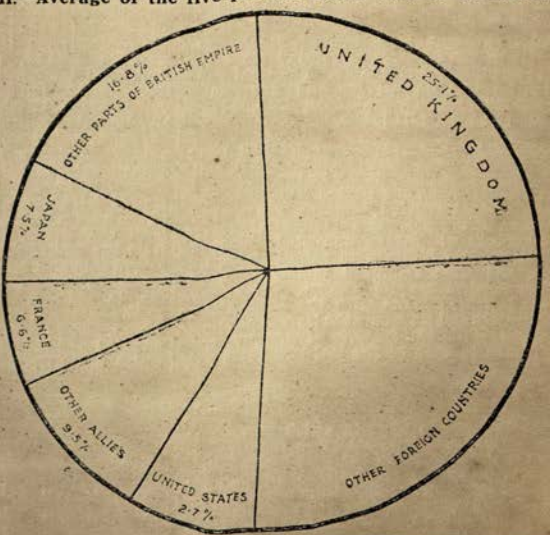
I.—Year ending 31st March 1917.

	Per cent.
British Empire.	50·4
Allies	26·3
United States..	12·9
Other Countries	13·4
	100



II.—Average of the five pre-war years 1909-10 to 1913-14.

	Per cent.
British Empire.	41·9
Allies	23·6
United States.	7·5
Other Countries	27
	100



	Rs. (lakhs)
Year 1912-13	241,35
„ 1913-14 (pre-war year) ..	244,20
„ 1914-15	177,48
„ 1915-16	192,53
„ 1916-17	233,15

As in the case of imports, the value exceeded the average of the quinquennium immediately preceding the war, and was, except for the two pre-war years 1912-13 and 1913-14, the highest on record. Of the total increase of Rs. 40,62 lakhs, raw cotton accounted for Rs. 9,25 lakhs. Other important increases were in hides and skins including leather Rs. 8,41 lakhs, seeds Rs. 6,32 lakhs, food grains Rs. 5,83 lakhs, jute manufactures Rs. 3,68 lakhs, and cotton manufactures Rs. 3,15 lakhs. The greatest decrease was in regard to tea which declined by Rs. 3,21 lakhs.

Jute and Jute manufactures.—The value of the exports of raw and manufactured jute amounted to 25 per cent. of the exports of Indian merchandise, and of this Bengal accounted for over 99 per cent. The value was Rs. 57,94 lakhs, an increase of 8 per cent. over the preceding year, and of 36 per cent. as compared with the pre-war quinquennial average. The value of the exports of raw jute increased by nearly Rs. 65 lakhs to Rs. 16,29 lakhs. The quantity exported, however, was less than in the preceding year. The estimated yield of the crop was 12 per cent. above that of the previous year, *viz.*, 1,490,000 tons or 8,340,000 bales. Owing, however, to the lack of tonnage and other abnormal circumstances brought about by the war, the quantity exported was ten per cent. below that of the previous year. India's premier export was, in the year under review, jute manufactures. The rapid extension of this trade in recent years merits to be set out in detail, the value of the exports now approximating to Rs. 42 crores. The goods exported are only a part of the goods made, as a considerable proportion is used in the country. In spite of the war with its attendant difficulties of freight and finance the exports of gunny cloth showed an increase of Rs. 2,41 lakhs of which Rs. 1,63 lakhs were due to higher prices and Rs. 78 lakhs to an increase in the volume of exports. There was also an increase of Rs. 1,18 lakhs in the value of gunny bags exported. The number of bags shipped increased while the weight decreased, sandbags for war purposes being lighter than the ordinary bags for transporting grain.

Cotton and Cotton Manufactures.—The value of the exports of cotton, both raw and manufactured, amounted to nearly Rs. 47 crores, as against Rs. 34½ crores in the preceding year, and nearly Rs. 45 crores, the pre-war quinquennial average. The 1915-16 Indian crops was much below that of 1914-15, being estimated at 3,738,000 bales of 400 lbs. as against 5,209,000 bales in 1914-15. The 1916-17 crop, which with the 1915-16 crop comes into statistical consideration in the year under review, was also sub-normal, the estimated outturn being 4,273,000 bales. Supply was not equal to demand, and prices rose to an unusually high level. The average wholesale price, for example of Broach cotton per candy of 784 lbs. in Bombay was Rs. 346 as against Rs. 269 in 1915-16, Rs. 211 in 1914-15, Rs. 295 in 1913-14, and Rs. 303, the average price of the pre-war quinquennium. The quantity shipped abroad decreased from 443,000 tons in 1915-16 to 425,000 tons in 1916-17. Although the shipments decreased in quantity, the aggregate value increased. There was an increase of Rs. 10,24 lakhs owing to higher prices, which was partly set off by a decrease of Rs. 99 lakhs due to a reduction in volume.

The percentage shares of the principal importing countries were—

	Average of five years 1909-10 to 1913-14.	1915-16.	1916-17.
Japan	42	66·9	68
Italy	9·7	12·7	11·4
United Kingdom	5	9·4	9·4
China	2·3	4·3	4
France	4·5	2·3	3·1
Spain	2·1	2·7	3
Germany	14·5	....	....
Austria Hungary	7	....	....
Belgium	11·5	....	....
Other countries	1·4	1·7	1·1
	100	100	100
Total tons	430,000	443,000	425,000
Value in Rupees	33,27,83,000	24,92,89,000	34,18,61,000

The prosperity of the cotton industry was one of the chief features of the year. The production of piece goods in Indian mills, and the export of these goods abroad reached record figures. Stocks were below normal, prices were exceptionally high, demand owing to a favourable monsoon was brisk, and competition was reduced almost to a negligible factor, especially in regard to the low grades of goods, which before the war were imported from Germany and Austria-Hungary. At the end of the year the position of the industry was stronger than it had been for many years.

Cotton Yarn.—The increase in the exports of cotton twist and yarn by Rs. 57½ lakhs was accounted for by the rise in prices. The value of the exports was nearly Rs. 7,50 lakhs and China was as in previous years, the chief importer of Indian yarn. The exports to Egypt Persia, the United Kingdom, Siam and also to Native States in Arabia except Maskat, were much above the imports of the preceding year and the pre-war average.

Cotton Goods.—The exports of cotton goods were valued at Rs. 5,26 lakhs of which piecegoods were approximately Rs. 5,06 lakhs. There was an increase of Rs. 2,59 lakhs in the exports of cotton piecegoods, accounted for by an increase of Rs. 2,32 lakhs due to an increase in the volume of the exports and of Rs. 16 lakhs due to higher prices. The quantity exported was more than double that in the preceding year and nearly three times the average exports during the pre-war quinquennium.

The exports abroad of **food grains** were nearly 2,915,000 tons and were larger than the exports of the previous year by 19·6 per cent. These exports, however were much below normal, being 34 per cent. less than the pre-war average. Notwithstanding the scarcity of tonnage, the foreign trade in rice was well maintained. Nearly 1,585,000 tons were exported. These exports were valued at nearly Rs. 18,42 lakhs, an increase of Rs. 3,13 lakhs over the exports of 1915-16. This increase was accounted for by an increase of Rs. 2,81 lakhs due to the larger volume of the trade, and of only Rs. 32 lakhs, due to a higher level of prices.

The exports of **wheat** although 12 per cent. above those of the preceding year, were 44 per cent. below the pre-war normal, and were valued at Rs. 8,95¼ lakhs as against Rs. 8,44 lakhs in 1915-16. If the prices had remained at the same level as in the preceding year, the value of the exports would have been higher by Rs. 52 lakhs, and would have amounted to nearly Rs. 9,48 lakhs instead of Rs. 8,95¼ lakhs. The decrease, however, owing to lower prices, was set off by an increase of Rs. 1,04 lakhs due to the larger volume of trade. The main features of the year's trade in **hides** and **skins** were the large increase in total exports, the record exports of leather, and the large quantities of raw and tanned hides and skins sent to the United Kingdom and to the United States. Raw hides and skins, were valued at Rs. 14,41 lakhs or 60 per cent. of the total exports. Prices ruled high, and the increase of Rs. 4,62 lakhs view was accounted for by an increase of Rs. 3,60 lakhs on account of higher prices, and of Rs. 1,02 lakhs on account of a greater volume of trade. In tanned hides and skins there was an increase of Rs. 2,43 lakhs due to higher prices, and Rs. 1,28 lakhs due to an increase in the volume of the trade. Ninety-nine per cent. of the exports of tanned hides went to the United Kingdom which nearly doubled its imports from India as compared with the pre-war average. For **tea** producers the season was, in spite of many adverse conditions, exceptionally satisfactory. The year was not so prosperous as the preceding year, when a record outturn and a record price level were reached. Nevertheless owing to increased acreage and scientific manuring outturn was larger than in any previous year except 1915, and prices were only 3 pies less than the record of that year. The preliminary estimate of outturn for India, based on returns received in this Department, is about 369 million lbs. a decrease of nearly 3 million lbs. as compared with the outturn of the preceding year. The average prices realised in Calcutta at the auction sales during 1916-17 were 8 annas 8 pies per lb. as against 8 annas 11 pies in 1915-16, and 7 annas 7 pies in 1914-15.

The year's trade in **seeds** was marked by a considerable increase in the quantity exported and also by the high prices and strong demand for linseed in England. The value of the exports increased from Rs. 10,12 lakhs in the preceding year to Rs. 16,44 lakhs. The increase of Rs. 6,32 lakhs was accounted for by an increase of Rs. 4,43 lakhs due to the greater volume of exports, and of Rs. 1,89 lakhs due to higher prices. The exports of **raw wool**, excluding re-exports were 48 million lbs. or 17 million lbs. less than the exports of the preceding year and nearly 6½ million lbs. less than the pre-war average. The exports were valued at Rs. 3,78 lakhs, or only one lakh less than the exports of 1915-16.

DIRECTION OF TRADE.

In war-time additional interest attaches to the destination of exports and re-exports, and to the sources of imports. The following table summaries the changes that have taken place in the direction of trade in the year under review, as compared with the preceding year, and the pre-war quinquennial average.

	Imports.			Exports.			Total Trade.		
	Pre-war average.	1915–16	1916–17	Pre-war average.	1915–16	1916–17	Pre-war average.	1915–16	1916–17
	Share per cent	Share per cent	Share per cent	Share per cent	Share per cent	Share per cent	Share per cent	Share per cent	Share per cent
United Kingdom ..	62.8	59.4	58.7	25.1	38	33.3	40	46.6	43.1
British Possessions	7	8.3	7	16.8	17.4	17.1	12.9	13.8	13.2
Total British Empire	69.8	67.7	65.7	41.9	55.4	50.4	52.9	60.4	56.8
Allies	7.1	9	12.2	23.6	21.7	23.3	17.1	16.6	19
Neutrals	14.5	23	22.1	20.9	22.9	26.3	18.4	22.9	24.7
Enemy countries ..	8.6	.3	..	13.6	..	..	11.6	.1	..
Total Foreign countries	30.2	32.3	34.3	58.1	44.6	49.6	47.1	39.6	43.73
Total value of trade thousands of £ ..	97,231	87,991	99,748	149,411	131,587	160,591	246,642	219,578	260,339
Total value of trade lakhs of Rupees	145,85	131,98	149,62	224,12	197,38	240,89	369,97	329,36	390,51

The table refers to merchandise and excludes treasure. The United States is treated as a neutral, because that country was not a belligerent in the year. A conspicuous feature of this table is that in 1916-17 as compared with the pre-war quinquennium, trade with the United Kingdom and other parts of the British Empire increased. In the case of foreign countries, on the other hand, there was a decline due to the enforced withdrawal from a profitable market of enemy countries which in the pre-war quinquennial period enjoyed nearly twelve per cent. of the total sea-borne trade of India. Neutrals and Allies increased their shares in the total trade, and the place, previously occupied by enemy countries has been taken mainly by Neutrals, and to a less extent by the United Kingdom and her Allies.

Share of the Empire.

Another outstanding feature is that the share of the British Empire in the import trade was less than in the pre-war quinquennium. Nevertheless nearly two-thirds of the imports in the year under review were drawn from the Empire. The decrease was due to the United Kingdom whose trade activities were completely dominated by the war. The total share of other parts of the Empire remained unchanged, while that of Neutrals and Allies noticeably increased. Before the war nearly nine per cent. of our import trade was with our enemies. Their place has in the main been taken by Japan and by the United States.

A noteworthy change has been effected since the outbreak of war in the direction of exports. Before the war, the major portion of our exports (fifty-eight per cent.) was consigned to countries outside the Empire, on account of the wide demand for India's raw and manufactured products. In the pre-war quinquennial period only forty-two per cent. of the export trade was consigned to countries within the Empire. In 1916-17 this percentage rose to over fifty mainly on account of the United Kingdom, which took one-third of the total exports, as against one quarter in the pre-war period. Before the war 13·6 per cent. of the exports went to Germany and to other enemy countries. Owing to the elimination of the enemy from the Indian market, the share of foreign countries declined. The share of the export trade with Allies has undergone no change. Neutrals, on the other hand, greatly increased their shares, and the chief among these was the United States.

Trade with Neutrals.

Next with regard to Neutrals. There was a remarkable growth in the trade with the United States. Since the war the value of the imports has increased by 144 per cent. and exports by 84 per cent, as compared with the pre-war

average. Iron and steel, motor cars, and mineral oil accounted for nearly two-thirds of the imports, while raw hides and skins together with jute raw and manufactures accounted for eight-tenths of the exports. As compared with the pre-war year, imports from America of iron and steel increased by Rs. 2,02 lakhs, motor cars and cycles by Rs. 1,23 lakhs and mineral oil by Rs. 80 lakhs. There was a rapid increase in the imports of dyes which amounted to Rs. 42 lakhs in the year under review. A striking increase, as compared with the pre-war year, was noticeable in the exports of hides and skins (which increased by Rs. 7,28 lakhs), and also in the exports of lac and jute manufactures. The trade with Spain and Norway expanded, while that with Holland, Sweden, and Denmark declined. The exports to Asiatic Turkey, Persia, Maskat and other Native States in Arabia, Sumatra, Indo-China, and the Philippines showed noticeable increases. Direct shipments to Cuba were much greater than in 1915-16. The value of the total trade with South America was, it is interesting to note, greater than the average of the pre-war quinquennium. The share of the trade with Neutrals in 1916-17 as compared with the preceding year and the pre-war quinquennial period was as follows:—

	Imports.			Exports.		
	Pre-war average.	1915-16.	1916-17.	Pre-war average.	1915-16.	1916-17.
United States	3.1	6	7.3	7.5	10.8	12.9
Java	6.4	10.2	8.9	1.2	.9	1.2
China	1.1	1.5	1.1	3.8	2.7	2.4
Persia	.4	.5	.5	.5	.9	1.3
Turkey, Asiatic	.4	.3	.4	1.1	.6	1.1
Spain	.1	.4	.3	.9	1.1	1.1
Holland	.9	.9	.7	1.5	.1	.2
Norway	.1	.4	.4	..	.1	.1
Sweden	.3	.6	.6	.1	.1	..
Argentine Republic ..	..	..	..	.9	1.6	1.1
Cuba	..	..	..	.2	.7	
Others	1.7	2.2	1.9	3.2	3.3	4.9
Total ..	14.5	23	22.1	20.9	22.9	26.3

FRONTIER TRADE.

Frontier trade in 1916-17 was greater than that of the preceding year, the pre-war year, and the pre-war quinquennial average, as will be seen from the following table which includes both merchandise and treasure:—

	Imports.	Exports.	Total.
	Rs.	Rs.	Rs.
Average of the five pre-war years 1909-10 to 1913-14	10,30,83,000	8,59,28,000	18,90,11,000
1913-14 (pre-war year)	12,01,87,000	9,42,26,000	21,44,13,000
1914-15	11,41,94,000	9,49,45,000	20,91,39,000
1915-16	11,90,47,000	9,50,17,000	21,40,64,000
1916-17	12,86,85,000	10,63,48,000	23,50,33,000

The trade is carried on with adjoining countries across a land frontier of approximately 6,800 miles. The value of this trade is comparatively small, being in 1916-17 about 6 per cent. of the total sea-borne trade.

The trade with **Nepal** is usually larger than the trade carried on with any other trans-frontier country, but, as already noted, in the year ending 31st March 1917, the trade was exceeded by that of the Shan States. The value of Nepal's trade, excluding treasure, was Rs. 6,01 lakhs, almost on the level of the preceding year, while that with the **Shan States** increased to Rs. 6,24 lakhs from Rs. 4,37 lakhs. The trade with **Afghanistan**, excluding treasure, was valued at Rs. 3,44 lakhs or 8 per cent. more than in the preceding year, and 32 per cent. more than the pre-war average. The trade with **Central Asia** across the North-West Frontier decreased from Rs. 47 lakhs in 1915-16 to Rs. 42 lakhs. There was also a decrease in the trade with **Siam** and **Persia**, but an increase with Tibet, chiefly on account of the large demand for wool, an interesting point as showing the far-reaching effects of the war into the plains of Tibet. The most noticeable decrease in the year's frontier trade was in the trade between Dir, Swat, and Bajaur on the one hand, and the districts of Hazara and Peshawar of the North-West Frontier Province on the other. The trade decreased from Rs. 1,44 lakhs to Rs. 56 lakhs.

INLAND TRADE.

The total imports and exports during the year are estimated at 68 million tons, valued at Rs. 10,14 crores as against last year's actuals, *viz.*, 65 million tons valued at Rs. 8,96 crores. The pre-war quinquennial average was nearly 60 million tons valued at Rs. 8,19 crores. The imports into the ports from upcountry of wheat, linseed, gram and pulse, rape and mustard seed were greater than those of the preceding year, while the imports of raw cotton, raw jute, rice, and tea declined. The bulk of the trade in wheat was, as usual, with Karachi, in linseed and raw cotton with Bombay (port) in rape and mustard seeds and jute with Calcutta. Cotton piecegoods, coal, sugar, tobacco, raw and dresssed hides and skins showed, it may be noted, a substantial increase in the arrivals into the ports as against the preceding year, and the pre-war quinquennial average.

The steady expansion of the exports of manufactured tobacco other than cigars from the Bihar block is interesting. The exports which amounted to 1,738,000 lbs. in 1907-08 increased to 10,231,000 lbs. in the pre-war year 1913-14. The pre-war quinquennial average was 7,205,000 lbs. In the year under review the exports were 10,632,000 lbs, a record figure. The output of the tobacco factory at Monghyr (which commenced business in 1908) was in the year under review 2,400 million cigarettes and 126,000 lbs. of smoking tobacco.

Railway earnings were Rs. 60,48 lakhs, as against Rs. 64,18 lakhs in 1915-16, an increase of Rs. 5,30 lakhs or 8 per cent. The earnings of the principal railways which contributed to this increase were as follows, the figures in brackets being the earnings in the preceding year: East Indian Rs. 10,95 lakhs (10,52 lakhs); North-Western Rs. 9,71 lakhs (Rs. 8,41 lakhs); Great Indian Peninsula Rs. 9,62 lakhs (Rs. 9,04 lakhs); Bombay, Baroda and Central India Rs. 7,27 lakhs (Rs. 6,94 lakhs); Bengal Nagpur Rs. 5,08 lakhs (Rs. 4,44 lakhs); Madras and Southern Mahratta Rs. 4,58 lakhs (Rs. 4,15 lakhs); Eastern Bengal Rs. 3,69 lakhs (Rs. 3,48 lakhs); and the South Indian Railway Rs. 3,20 lakhs (Rs. 2,96 lakhs).

CUSTOMS REVENUE.

The gross Sea and Land Customs Revenue (excluding Salt Revenue) amounted to Rs. 12,99 lakhs, as against Rs. 8,81 lakhs in the preceding year, and Rs. 9,84 lakhs the pre-war quinquennial average. The increase was the result of the changes in the rates of duty by the amendment of the Indian Tariff Act in March 1916, and in March 1917. The most important increases were in sugar (+ Rs. 1,29 lakhs), raw material (+ Rs. 23 lakhs), articles of food and drink (+Rs. 20 lakhs), and tobacco (Rs.18 lakhs), while silver bullion and coin recorded a decrease of over Rs. 80 lakhs, and petroleum of over Rs. 26 lakhs. The export duty on rice increased by 14 per cent. to approximately Rs. 87 lakhs. The export duty on raw and manufactured jute amounted to Rs. 1,18 lakhs, while that on tea realised over Rs. 42 lakhs. The excise duty on cotton manufactures decreased by 9 per cent, to approximately Rs. 45 lakhs.

The general tariff rate on imported articles which stood at 5 per cent. *ad valorem* since its imposition in 1894 was raised to 7½ per cent. with effect from March 1916. In addition to articles grouped under the 7½ per cent. *ad valorem* rate, are those free of duty, liable to duty at special rates and at 2½ per cent. Gold, living animals, raw cotton, raw wool, raw hides and skins, cotton twist and yarn, cotton machinery, quinine, certain agricultural requisites and a few other articles are admitted free. Special duties are levied on sugar at 10per cent., on silver bullion and coin at 4 annas per oz., on silver manufactures at 15 per cent. (but at 10 per cent. from March 1917), coal 8 annas a ton, arms and ammunition at 20 per cent., cigars and cigarettes at 50 per cent. and petroleum one anna and six pies per Imperial gallon (with an import duty of 6 annas per gallon on petrol), spirits at varying rates, generally at Rs. 11-4-0 per Imperial gallon, and

also on a few other articles. Iron and steel, machinery except that for cotton spinning and weaving, railway materials and certain other articles are charged at 2½ per cent. *ad valorem*. By the amendment of the Tariff in March 1917 the duty on cotton goods is now 7½ per cent. *ad valorem*. The export duty imposed in March 1916 on raw and manufactured jute has been doubled, *i.e.*, it now stands at Rs. 4-8-0 for raw jute per bale of 400 lbs. with a special rate of Rs. 1-4-0 per bale on cuttings, and at Rs. 20 per ton for sacking goods and Rs. 32 per ton on hessians. The export duty on tea is Rs. 1-8-0 per 100 lbs. The tea cess collected by Government since 1903 on behalf of the tea industry for the promotion of the sale of Indian tea amounted to Rs. 3,48,000 in the year under review.

Shipping.—The tables of shipping showing the number and tonnage of vessels that entered and cleared during the year are of great interest. They reveal the secret of the extraordinary high freights referred to in previous chapters. The decrease in tonnage was as much as 26 per cent. as compared with the average of the pre-war quinquennium, and 1.6 per cent. as compared with the preceding year. The main point here is that clearances decreased by 28 per cent. as compared with the pre-war averages. In the pre-war years clearances of British tonnage were 79 per cent. and of foreign tonnage 21 per cent. of the total. In the year under review the former were 81 per cent. and the latter 19 per cent. The clearances to the United Kingdom, Japan and the United States are noticeable.

Coin and Bullion.—The flow of treasure into and from India presented some very remarkable features during the year under review. As a result of the difficulties placed in the way of exporting gold by belligerent countries, the imports into India were only 40 per cent. of the average imports during the pre-war quinquennium. There was also a noticeable change in the sources of these imports Before the war, gold was imported at certain times of the year in large quantities by the Exchange Banks and bullion brokers from the United Kingdom, and sovereigns in transit from Australia or ready for export from Egypt were frequently diverted to India. The United Kingdom, Egypt, and Australia were in fact the chief sources of supply. In 1916-17, however Natal, China and Japan were the chief countries of consignment. The shipments from Natal amounted to £6,091,000 of which £6,054,000 were in bar gold. The whole of this bar gold is warehoused in Bombay on behalf of the Bank of England. The shipments from China were also in bullion, while those from Japan were in sovereigns. The imports from the United States were abnormally high, since the United States rarely ships gold in any quantity direct to India. The exports out of India were comparatively unimportant, and were chiefly in the form of sovereigns to meet the requirements of troops in Mesopotamia and Egpyt. The absorption of gold coin and gold bullion was Rs. 809 lakhs or £5,393,000. This figure, although greater than that of the preceding year, was still much below the average of the pre-war quinquennial period.

In regard to silver the principal features of the year were the high level of prices and the large imports on Government account for coinage purposes. The price of silver per ounce in London was 36½*d.* at the end of the year, as against 20*d.* at its commencement. The high level with which the year closed had not been reached since 1893. The main sources of supply were China, the United Kingdom, Australia, and the United States. The exports of silver showed a substantial increase on private as well as on Government account mainly owing to larger exports of rupees to Mesopotamia, East Africa, the Bahrein Islands, and Ceylon, and of piastres, coined in the Bombay Mint to Egypt.

The Balance of Trade.—An important feature of the year's trade was the gap between exports and imports. This amounted to over £59,000,000 as against nearly £40,000,000 in the preceding year, and £27,000,000 the pre-war quinquennial average.

A Trade Commissioner.—In 1915 a temporary appointment of **Indian Trade Commissioner in London** was made as an experimental measure, with the object of assisting in finding outlets for Indian exports, the normal markets for which were cut off owing to the war. The appointment was held for a short time by Mr. M. M. S. Gubbay, C.I.E., I.C.S., but lapsed on his return to India. The Government of India have had under consideration the desirability of establishing the post on a permanent basis. They recognise that it will in future be a matter of high importance that Indian trade should be directly represented in London and they accordingly laid before the Secretary of State proposals for the permanent appointment of an Indian Trade Commissioner in London. These proposals have been accepted and are now announced for general information.

The principal function of the Trade Commissioner is the assistance of Indian export trade. He will advise the commercial public in their search for fresh markets for Indian products and establishing new commercial connections within the Empire and will help Indian Industrialist in their enquiries regarding machinery and processes of manufacture. He will work in close co-operation with the Commercial Intelligence Branch of the Board of Trade, and with the Director General of Commercial Intelligence in India, and will be a source of ready information to the public on Indian commercial and industrial matters. His Office will be located in the City so that he may be in direct and immediate touch with merchants and others interested in Indian products. It has been decided to associate with the Trade Commissioner an Indian assistant with commercial experience.

Mr. D. T. Chadwick, I.C.S., who was recently on deputation to Russia, France and Italy, with a view to promoting commercial relations between India and those countries, has been appointed the first Indian Trade Commissioner in London; and Mr. Jehangir M. N. Wadia his Assistant.

Treasure.—The private imports of gold bullion and coin showed a very large decrease from Rs. 28,23 lakhs in 1913-14 and Rs. 10,70 lakhs in 1914-15 to Rs. 5,24 lakhs only in 1915-16. The imports decreased by more than half, owing to the restriction on the movement of gold. The United Kingdom contributed Rs. 2,87 lakhs, Australia Rs. 1,48 lakhs, and Asiatic Turkey, Aden and China about Rs. 26 lakhs each. The exports on private account amounted to Rs. 6,39 lakhs, as against Rs. 2,25 lakhs in 1914-15 and Rs. 4,90 lakhs in 1913-14. Of the total exports 48 per cent. was in bullion and 52 per cent. in the form of coined gold. Japan received a consignment of Rs. 3,18 lakhs and the United Kingdom of Rs. 3,04 lakhs. Government imports were valued at Rs. 3¾ lakhs, but there were no exports on Government account. There was thus a total net export of gold amounting to Rs. 1,11 lakhs; only thrice in the previous 40 years has there been a net export of gold from India.

In 1915-16 the net absorption was only £3,600,000 as against £12 millions in 1914-15, and £23 millions in 1913-14. The net absorption during the past forty-three years ending 1915-16 amounted to no less than £232 millions.

ABSORPTION OF GOLD.

(In thousand of £ sterling.)

	1873-74.	Average of 5 years ending.						
		1878-79.	1883-84.	1888-89.	1893-94.	1898-99.	1903-04.	1908-09.
1. Net annual addition to the stock of the country..	1,000	600	3,200	2,400	2,000	2,800	6,000	8,400
2. Progressive total of additions to the stock ..	1,000	4,000	12,200	28,000	40,000	46,000	72,400	110,800
3. Held in mints and Government Treasuries and Currency and Gold Standard Reserves ..	..	..	..	..	..	400	8,400	4,400
4. Net annual variation in item 3..	..	..	..	..	..	400	1,800	—2,200
5. Net progressive absorption ..	1,000	4,000	12,200	28,000	40,000	46,200	64,000	106,400
6. Absorption of the year ..	1,000	600	3,200	2,400	2,000	2,400	4,200	10,000

	1909-10.	1910-11.	1911-12.	1912-13.	1913-14	Average of 5 years ending 1913-	1914-15.	1915-16.
1. Net annual addition to the stock of the country.	16,000	18,000	27,000	25,000	18,000	20,800	7,000	1,600
2. Progressive total of additions to the stock ..	144,000	162,000	189,000	214,000	232,000	188,200	239,000	240,600
3. Held in mints and Government Treasuries and Currency and Gold Standard Reserves ..	6,000	6,000	16,000	20,000	15,000	12,600	10,000	8,000
4. Net annual variation in item 3..	6,000	..	10,000	4,000	—5,000	3,000	—5,000	—2,000
5. Net progressive absorption ..	138,000	156,000	173,000	194,000	217,000	175,600	229,000	232,600
6. Absorption of the year ..	10,000	18,000	17,000	21,000	23,000	17,800	12,000	3,600

The imports of Government of India rupees were valued at Rs. 35 lakhs and the exports amounted to Rs. 1,79 lakhs, of which Rs. 80 lakhs were on Government account to meet special demands in the Persian Gulf, in Egypt (where the rupee has temporarily been made legal tender), in East Africa, and in Aden. Exports of rupees also took place to Arabia, the Bahrein Islands, Ceylon and the Straits.

COMMERCIAL INTELLIGENCE SYSTEM.

The Commercial Intelligence Department, India, was founded in 1905 under the control of a Director General of Commercial Intelligence. Its primary object was the supply to the public of such information as would stimulate Indian trade development. Since April, 1914, the compilation and issue of official statistics of India have been carried out by the Department of Statistics, India, under the control of a Director of Statistics.

As now constituted the Department serves the purpose of a Central Bureau at which information on subjects of commercial interest is collected and disseminated to the public, and from which replies are posted to enquiries by business men on commercial matters. It is situated at 1, Council House Street, Calcutta, the headquarters of the Director-General. The information collected by the Department and intended for general publication is printed in its weekly official organ, the "Indian Trade Journal." The principal features of the "Journal" are (*a*) information as to Tariff Changes in the United Kingdom and elsewhere which affect Indian interests, (*b*) Summaries of the leading features of consular and other trade reports, (*c*) Abstracts of the proceedings of the various Chambers of Commerce in India, (*d*) Abstracts of crop reports and forecasts. (*e*) Government orders, *communiques* and other notices affecting trade, and (*f*) anonymous enquiries for securing trade introductions. It also contains analyses of Indian trade statistics.

A Commercial Museum has been permanently organised as a part of the Commercial Intelligence Department with the object of bringing together purchasers and suppliers of Indian manufactures. It thus supplements the existing resources of the Department as a bureau of information, and stimulates the development of the natural resources of the country. The Museum contains samples of such goods of Indian manufacture as have been received for exhibition together with information as to prices and the names of the manufacturers and commercial agents. The exhibits have been carefully grouped and catalogued. Order books are available in which orders may be registered direct with the manufacturers or their respective commercial agents. An Enquiry Office is attached to the Museum, which is also located at 1, Council House Street, Calcutta, and is open on week days from 10-30 a.m. to 5-30 p.m. and on Saturdays from 10-30 a.m. to 2-30 p.m. *Admission Free.*

Department of Statistics.—This was originally created in 1895 and in 1914 was re-created and re-organised. It is officially under the Department of Commerce and Industry but compiles and publishes reports and returns under the orders of other executive departments.

It is divided into two main divisions, each under a Superintendent. The first division consists of six sections and the second division of four sections.

Section I, the Registry Section, deals with the receipt and issue of letters, pay, pensions, distributions of publications, record and library; Section II deals with Prices, Rate Lists and Freights; Section III with Wage Statistics; Section IV, Judicial, Administrative, Educational and Vital Statistics; Section V, Rail and River Borne Trade; Section VI, Statistics relating to the Inland and Frontier trade of Bengal; Section VII, perhaps the most important section in the whole Department, the Sea-borne Trade section, which compiles the All India Sea-borne Trade Returns including Coasting Trade, Treasure, Shipping, and Customs duties; Section VIII deals with Frontier Trade; Section IX with the Agricultural Returns, Crop Forecasts, Cotton Press Returns, etc; Section X deals with Commercial and Financial Statistics.

Director of Statistics:—G. Findlay Shirras, 1, Council Street, Calcutta.

ADULTERATION OF PRODUCE.

In August 1917 the Department of Commerce and Industry, Government of India, issued a long memorandum to Chambers of Commerce in India on the subject of the adulteration of Indian produce. This memorandum said:—Cotton is still watered; jute is still watered; groundnuts, hides, indigo, oils are freely adulterated; this at least is common knowledge. It is unnecessary to dilate on the loss to Indian trade which this practice of adulteration must involve, but it appears to the Government of India to be specially important at the present time to endeavour to focus attention on the matter. It seems reasonable to suppose that the present war will be followed by a period of keen competition among industrial nations for materials of all descriptions and for products which India should be in a specially favourable position to supply. But it cannot be expected that India will be able to capture and retain the extended markets which should fall to her share, if steps are not taken to effect a radical improvement in the reputation which, the Government of India fear, some of her products have only too justly merited.

Attitude of Government.—After reviewing the facts concerning the adulteration of wheat, cotton, jute, leather, hemp, and bees' wax the memorandum continued:—It will be seen from the preceding sketch of previous discussions on this subject that the Government of India have been consistently opposed to any attempt to meet the evil by legislative measures. They have held the view that any such measures would be extremely difficult to carry into effect, would seriously hamper trade, and would probably, in any case, prove ineffectual as a practical remedy.

They have maintained the opinion that the proper agency for dealing with these abuses is the trade itself, and that no intervention on the part of Government is desirable. To these views they are still inclined to adhere. At the same time, they would welcome any suggestions on the subject, and would be glad to co-operate, if further discussion should show that any action on their part is at once feasible and desirable. It seems to them, however, more probable that the situation could be most satisfactorily dealt with without any intervention on the part of Government. If the leading exporting firms of any particular commodity in India would arrange with their leading buyers that the latter should insist on freedom from adulteration, an improvement could probably be more readily effected by this means than by any action on the part of Government. This would seem to be the most fruitful line of attack, but it has also been suggested that Chambers of Commerce in India might organise some system of certifying to the purity of products before export. This suggestion seems worthy of consideration.

Adulteration of Ghee.—In the autumn of 1917, considerable feeling was evoked in Calcutta by the practice of adulterating ghee. For instance, a panchayat of Marwaris excommunicated five ghee dealers, in one case two partners were excommunicated for one year and ordered to pay Rs. 1,00,000 towards the purchasing of grazing ground for cattle. In another case a father and son were fined Rs. 25,000 and in other cases the fines ranged from Rs. 500 to Rs. 1,000. Feeling waxed so strong that a deputation asked the Governor to move the Government of India to pass an ordinance, pending legislation, penalising both the adulteration of ghee and the selling or stocking of adulterated ghee. Shortly afterwards an Emergency Bill was introduced, by Sir S. P. Sinha, in the Bengal Legislative Council, to amend the Calcutta Municipal Act, with special reference to ghee adulteration. Sir Satyendra, in introducing the Bill, said that the existing law had failed to check the practice of adulterating ghee and selling adulterated ghee in Calcutta. In view of the evils resulting from widespread adulteration it was considered necessary that more stringent measures should be taken to provide for the purity of the article and to penalise the manufacture, storage, and sale of ghee that was adulterated. In this Bill a definition for adulteration had been introduced by which ghee must not consist of any article which was not extracted from milk. The penalty imposed under the Bill for offences ranged from a fine of Rs. 200 to Rs. 1,000. The Bill was taken up for consideration after suspending the rules of business and passed.

Burma Ghee Adulteration Act.—In Burma a similar Bill was passed in October, 1917, when the mover of the Bill explained that all that the Bill proposed was to ensure that a purchaser who desires to obtain ghee should be entitled to receive an article which was derived exclusively from milk. If purchaser desired a cheaper substitute, the Bill did not prevent him from obtaining it. It did, however, prevent him from receiving such substitute under the impression he was purchasing ghee. It was not anticipated that the Bill would effect any dislocation of any established trade. It would be necessary for manufacturers and dealers of mixtures which had hitherto been sold under the name of ghee to arrange to sell such mixture under distinctive names in order that the customer might be fully aware he was not purchasing ghee. If such names were speedily adopted, the evils resulting from the sale of these mixtures as ghee would be prevented without any loss or dislocation of industry.

THE CIVIL VETERINARY DEPARTMENT.

To the Civil Veterinary Department, which originated in 1892 as an expansion of the military horse-breeding department, is entrusted the performance or supervision of all official veterinary work in India, other than that of the Army. Its duties fall under the main heads of cattle disease and cattle breeding, horse and mule breeding, and educational work in veterinary colleges.

In 1905 and the following years both the superior and the subordinate establishments were considerably increased; but the strength of the subordinate staff in most provinces was still far short of the sanctioned establishment, the demand for veterinary graduates being greater than the supply, and the European staff remained small in proportion to the volume of work calling for attention. The post of Inspector-General, Civil Veterinary Department, was abolished with effect from the 1st April 1912, the duties being transferred partly to local Governments and partly to the Agricultural Adviser to the Government of India. Of late years small veterinary departments, modelled on the Civil Veterinary Department, were started in several native states.

INDIAN COTTON DUTIES ACT.

The origin of this fiscal measure dates back to 1894 when the embarrassment caused to the finances of India by the fall in exchange drove the Government of India to the necessity of adopting measures to increase their sources of revenue. Among these measures was the re-imposition of the Customs Tariff which had been in force prior to 1882 subject, however, to this difference that cotton yarns and fabrics, which had formerly been subjected to an import duty, were in 1894, excluded from the list of dutiable articles. This partial re-imposition of import duties had been recommended by the Herschell Commission which, in reporting in 1893 on the currency question, had favoured this method of adding to the revenue as being the least likely to excite opposition. In point of fact, however, this recommendation which was carried into effect in the Indian Tariff Act of March 1894 gave rise to very marked opposition. In support of their policy the Government appealed to the Resolutions passed in 1877 and reaffirmed in 1879 by the House of Commons, the first of which had condemned the levy of import duties on cotton fabrics imported into India as "being contrary to sound commercial policy," while the latter called upon the Government of India to effect "the complete abolition of these duties as being unjust alike to the Indian consumer and to the English producer." It was, however, an open secret that the decision to exclude from the list of dutiable articles cotton yarns and fabrics was not the decision of the Government of India but that of the Secretary of State. It was pertinently pointed out that the volume of trade in cotton goods and yarns then represented nearly one-half of the total imports from abroad, and that the exemption of these important commodities single other important commodities when practically every single other commodity was being subjected to an import duty could not be justified on its merits as a sound fiscal measure, much less when it was an admitted fact that the Budget would still show a deficit.

Excise Duties Imposed.—The opposition to this measure, though it failed to secure its rejection in the Legislative Council, was strong enough to induce the Secretary of State to reconsider the matter. Yielding to the united representations of the Government of India and of Indian public opinion, His Majesty's Government eventually agreed to the re-imposition of import duties on cotton yarns and fabrics provided that it could be shown that such a measure was necessitated by the position of Indian finances, and that it was combined with an Excise duty which would deprive the import tax of any protective character. Accordingly in December 1894, consequent on the further deterioration in the financial position, two bills were introduced in the Legislative Council. The first of these subjected cotton yarns and fabrics to the general import duty of 5 per cent. *ad valorem*. The second imposed an Excise duty on all cotton yarns of 20's and above produced by Mills in British India. In introducing this latter Bill the then Finance Minister, Sir James Westland, was careful to explain that the policy underlying its provisions had been imposed on the Government of India by the Secretary of State in pursuance of the Resolution of the House of Commons quoted above. The provisions of this particular Bill are of little interest. From the first it was recognised that they were unpractical Lancashire and Indian spinners disagreed as to the point at which the line should be drawn exempting Indian yarns from the Excise Duty. Practical difficulties were pointed out by Indian spinners as to the impossibility of spinning precisely to a particular count. From the Lancashire point of view it was contended that the Bill offered facilities for evasion while it was admitted that under the system adopted in the Bill, the taxation of Indian and Lancashire products was not being carried out on a similar basis.

Act of 1896.—The Act was in fact doomed to be short-lived, and in December 1895 the Government of India were compelled to re-consider the whole position and to introduce an entirely new measure which became law in January 1896 as the Indian Cotton Duties Act II of 1896. This measure proceeded from two conclusions, namely, that no attempt should be made to obtain any duty from yarns whether imported or locally manufactured, and that an equal rate of duty should be applied to all woven goods whether imported or of Indian origin. With the object of conciliating the opposition, the rate of duty was fixed at 3½ per cent. as opposed to the general rate of Customs duty of 5 per cent. The main provisions of the Act provided that the assessment for the purposes of collecting the Excise duty should be based on returns submitted by the mill-owners; and that provision should be made for a rebate in the case of woven goods exported out of India. No control beyond a requirement that statistical returns should be furnished was attempted in respect of spinning mills. On the other hand certain concessions in the matter of import duty on Mill stores were made by executive order so as to place Indian Mills on a footing more or less equal to their Lancashire competitors.

Criticisms of the Measure.—It is not possible within the limits of the present article to do more than summarise the criticisms with which this measure was received in India. Much of the opposition was based on grounds of a transient character; as for instance that the Indian industry was then in a state of continued depression and that it had been hard hit, particularly in respect of its export trade, by the currency legislation, and by the uncertainty as to the fiscal policy of Government. In some quarters objection was offered to the exemption of yarn, which it was alleged, would place the Indian hand weaving industry at an advantage with the Indian power weaving industry. But the hostility to this measure, as also to the earlier measures already described, clearly proceeded from the feeling that the policy of the Government of India and of the Secretary of State had been dictated by Lancashire, and that the action of Lancashire was due not so much to the fact that there was any real competition between Indian and Manchester goods, but to a desire to handicap the Indian industry

whose progress was already causing uneasiness to Lancashire interests. It was argued that the imports from Lancashire were practically all of the higher counts, which, for climatic and other reasons, Indian mills could not produce: that in any case the advantage to the Indian millowner of the import duty was inconsiderable and was counterbalanced by certain drawbacks, arising from the inferiority of Indian labour, which could not be overcome; and that this advantage, such as it was, could scarcely be said to have a protective character, in view of the higher cost of initial equipment in the case of an Indian mill which has to import its machinery, and of working expenses consequent on the scarcity of skilled labour and on the necessity of importing stores required in the production of cloth. Finally, from the standpoint of the consumer, very severe criticism was directed against the reduction, in favour of imported cotton goods, of the general rate of duty from 5 per cent. to 3½ per cent. on the ground that the effect of the legislation would relieve the richer classes who were consumers of the finer Manchester fabrics and impose new taxation on the poorer classes whose requirements were met by the Indian mills.

New Factors in the Situation.—Since the passing of this measure into law the policy of the Government of India in this respect has frequently been the subject of attack in the press and in the Legislative Councils while it has also formed the subject of continued representations by the industrial interests affected and political organizations. In more recent years the agitation in favour of the abolition of the Excise duties has been revived by the growth in England of a strong body of public opinion in opposition to the policy of Free Trade. Advantage has been taken of this new phase in English economic thought to press on behalf of India the acceptance of a policy of Protection and the removal of the Excise duties is now claimed by the opponents to this measure as a necessary corollary of the application to the British Empire of the principles associated with the name of Mr. Chamberlain. A new factor in the situation which has strengthened the position of those who are in opposition to the Excise duties is to be found in the severe competition which Indian mills have to face in China as well as in India from the Japanese industry. The Japanese market was lost to India in the early years of this century. More recently, however, Japan has entered as a competitor with India into the China market, while within the last few years it has pushed its advantage as against the Indian millowner in the Indian market itself. Again it is claimed that the recent enhancement of the silver duty has materially affected the position of the Indian spinner who relied on the China market. On two occasions within the last five years the question of Excise duties has come prominently to the front as a result of debates in the Viceroy's Council. The official attitude is firmly based on the position that the Excise duties stand and fall with the import duties. Against such an attitude all arguments based either on the advantages of a Protectionist as opposed to a Free Trade policy or on the handicap to which the present system exposes the Indian millowner can, of course, make no head way. The Government of India are confronted with a heavy recurring loss in their revenues as a result of the abolition of the opium traffic.

Policy of 1917.—The policy of Government towards the Cotton Duties underwent a further development in 1917. In the budget of that year provision was made for interest and sinking fund charges on £ 100 millions, the contribution of India towards the cost of the war. This demanded in addition to the natural increase in the revenues fresh taxation to the extent of £ 3 millions per annum. Amongst the expedients adopted to produce this revenue was the raising of the import duty on cotton goods from 3½ per cent to 7½ per cent. which is the general tariff rate. At the same time the cotton excise duty was fixed to remain at the previous figure of 3½ per cent. thus giving the indigenous industry a slight protection to the extent of 4 per cent. The question of the abolition of the Excise entirely had to be dismissed from consideration in view of the demands upon the exchequer, as it was estimated to produce in 1917-18 £ 320,000. By means of the increase in the tariff on Cotton Duties the Finance Member estimated to produce an additional £ 1 million per annum. The proposal was received with immense satisfaction in India as a step towards the righting of what is almost everywhere regarded as a reverse economic wrong. It aroused very vehement protests in Lancashire where the cotton industry organised its political vote and brought great pressure to bear upon the Secretary of State to withdraw the measure. Mr. Austen Chamberlain, the then Secretary of State for India, stood firm and with the Government at his back refused to budge an inch from the position which he had taken up in supporting the Government of India in this matter. There were anxious moments in the House of Commons when the Labour Party joining with the Irish Nationalists and the Lancashire vote mobilised its forces against the Government especially as the attitude of Mr. Asquith and his following was obscure. In the end Mr. Asquith gave his support to the Government policy on the understanding that this, in common with all other fiscal issues, would be reconsidered at the end of the war. With this support, the Bill was carried through the House of Commons by a large majority. Whatever may be the influence of this slight protective duty in the future it cannot possibly affect the Lancashire industry at the present time. The dominant factor governing the imports of cotton is not its price but freight and prices have soared to such heights that a four per cent. protective duty cannot possibly influence the volume of Lancashire trade whilst these conditions prevail.

Banking.

Of the three Presidency Banks the Bank of Bengal which commenced business in the year 1806 is by far the oldest. It was followed by the Bank of Bombay in 1840 and by the Bank of Madras in 1843, but the former was wound up in the year 1867 and the present Bank dates from the year 1868.

To commence with and for some considerable time thereafter Government had a very large interest in all three Banks, holding as they did a large proportion of the share capital and having the right to nominate a number of the Directors. It was decided however in 1876 that this connection should cease and Government holding of shares was accordingly realised in that year and the right to be represented on the Directorates was given up at the same time. Government are still entitled, however, to audit the Banks' accounts at any time if they deem this necessary, to call for any information touching the affairs of the Banks and the production of any documents relative thereto, and may also require the publication of such statements of assets and liabilities at such intervals and in such form and manner as may be thought fit. The Banks' Agreements with Government are usually arranged for a period of ten years at a time and now-a-days provide for the most part for the carrying on at the head offices and branches of the ordinary banking business of Government in India and for the management and conduct in the three Presidency towns of the Government loans. The management of the Government Savings Bank was at one time entrusted to the Bank, but this was handed over to the Post Office in the year 1896.

Paper Currency.

The Banks had the right to issue currency notes until the year 1862; but in that year this privilege was withdrawn and to compensate the Banks for being deprived of this right, Government decided to deposit the whole of their balances at the Presidency towns with the Banks. This practice held good until the year 1876, when the Reserve Treasuries were formed; but since that year Government balances, which are all payable at call, have only been maintained at a figure sufficient to meet the demands of Government and sufficient also to compensate the Banks in part for the work of keeping the accounts. There are signs however that Government intend to adopt a more liberal policy in future in regard to the balances they maintain with the Presidency Banks." There is no definite undertaking on the part of Government to keep any balance with the Banks either at the head offices or branches; but there is a stipulation that in the event of the balance at the head office of each Bank falling below a certain stated figure, which varies in the case of each Bank, Government will pay interest on the deficit.

In order to assist Government in their attempts to encourage the use of currency notes throughout India the Banks have recently undertaken to issue and encash on behalf of Government universal Currency notes for the public freely at most of their Branches and in consideration of their having undertaken this work Government have, it is understood, agreed to maintain certain minimum balances, at such Branches so long as they are entrusted with this work.

Government Deposits.

The following statement shows the Government deposits with each Bank at various periods during the last 40 years or so :—

In Lakhs of rupees.

—	Bank of Bengal.	Bank of Bombay	Bank of Madras.	Total.
30 June				
1876 ..	409	195	115	719
1881 ..	230	61	53	344
1886 ..	329	82	39	450
1891 ..	332	97	53	482
1896 ..	225	88	57	370
1901 ..	187	90	63	340
1906 ..	186	93	46	325
1911 ..	198	129	77	404
1912 ..	210	155	75	440
1913 ..	247	167	68	482
1914 ..	290	197	93	580
1915 ..	263	187	102	552
1916 ..	336	263	115	714
1917 ..	1338	716	209	2263

General Banking Business.

This is regulated by the Presidency Banks Act, 1876, under which Act all three Banks are now working. The various descriptions of business which the Banks may transact are clearly laid down in Sec. 36 of the Act, and it is expressly provided in Sec. 37 that the Banks shall not transact any kind of banking business other than those sanctioned in Sec. 36. Briefly stated the main classes of business which the Banks may engage in are as follows :—

(1) Investing of money in any securities of the Government of India or of the United Kingdom of Great Britain and Ireland, the stock or debentures of, or shares in Railways bearing a Government guarantee in respect of interest and the debentures and securities of any Municipal body or Port Trust in India or of the Bombay Improvement Trust and the altering, converting and transposing of such investments.

(2) Advancing of money against any of the securities specified above or against bullion or other goods which or the

documents of title to which are deposited with or assigned to the Bank as security.

(3) Advancing of money against accepted bills of Exchange and promissory notes.

(4) Drawing, discounting, buying and selling of bills of exchange and other negotiable securities payable in India or Ceylon.

(5) Receiving deposits.

(6) Receiving securities for safe custody and realisation of interest, &c., from constituents of the Bank.

(7) Buying and selling of gold and silver, whether coined or uncoined.

(8) Transacting pecuniary agency business on commission.

The principal restrictions placed on the business of the Banks are as follows:—

(1) The drawing, discounting, buying and selling of bills of exchange and other negotiable securities is *confined* to bills and securities payable in India and Ceylon.

(2) Borrowing of money is only permitted in India.

(3) Loans or advances upon mortgage or in any other manner upon the security of any immovable property or the documents of title relating thereto is expressly prohibited.

(4) The amount which may be advanced to any individual or partnership by way of discount or on personal security is limited to an amount prescribed in the Bye-Laws of the Banks, such Bye-Laws having previously been approved by Government.

(5) Loans or advances cannot be granted for a longer period than six months at a time.

(6) Discounts cannot be made or advances on personal security be given, unless such discounts or advances carry with them the several responsibilities of at least two persons or firms unconnected with each other in general partnership.

Various representations have been made to Government by the Banks to have certain of these restrictions withdrawn, particularly those referred to under Nos. 1 and 2, which latter effectually prevent the Banks from doing anything in the nature of exchange business and from having access to the London money market for borrowing purposes. The Government of India were prepared to meet the Banks wishes in the above connection to a great extent in the year 1903; but the Secretary of State did not approve of the Government proposals, and they were finally negatived in 1906.

Government Deposits.

The proportions which Government deposits have borne from time to time to the total Capital, Reserve and deposit of the three Banks are shown below :—

In Lakhs of Rupees.

—	1 Capital.	2 Reserve.	3 Government deposits.	4 Other deposits.	Proportion of Government deposits to 1, 2, 3 & 4.
31st December.					
1886	350	82	352	625	24·9 per cent.
1891	350	97	297	1412	13·7 ,,
1896	350	158	299	1292	14·2 ,,
1901	360	213	340	1463	14·3 ,,
1906	360	279	307	2745	8·3 ,,
1907	360	294	335	2811	8·8 ,,
1908	360	309	325	2861	8·4 ,,
1909	360	318	319	3265	7·4 ,,
1910	360	331	423	3234	9·7 ,,
1911	360	340	438	3419	9·6 ,,
1912	375	361	426	3578	9·0 ,,
1913	375	370	587	3644	11·8 ,,
1914	375	386	561	4002	10·5 ,,
1915	375	369	487	3860	9·5 ,,
1916	375	358	520	4470	9·0 ,,

The Banks have also the management of the debt of a number of the Municipalities, Port Trusts and Improvement Trusts throughout India.

Government policy in regard to the disposal of their surplus treasury balances in India has been strongly criticised at various times during the last thirty years or so, and it has been argued that the high rates of interest which are so common a feature in India when the crops come to be marketed are to a very large extent due to Government action in withdrawing money from the market when it is most needed and locking it up in the Reserve Treasuries. This question was considered at some length by the Royal Commission on Indian Finance and Currency q. v. which arrived at the conclusion that the present methods of dealing with the balances were open to criticism. The Commission further stated that the most obvious remedy would be to close the Reserve Treasuries and place the whole of the Government balances in the Presidency towns with the Presidency Banks; but their final recommendation in this connection was that Government should make loans from their balances to the Presidency Banks—such loans to be within the absolute discretion of Government and to be granted only on good security and for short periods. It is not known how far the Government of India are prepared to accept the Commission's recommendation in this respect; but it is understood that the matter is presently under consideration.

The question of the establishment of a State Bank was considered at some length by the Commission and a considerable mass of evidence was taken on this point. The opinions offered were however very conflicting, and although a draft scheme for such a Bank was drawn up by two of the Members of the Commission, the Commission as a whole finally came to the conclusion that they were not in a position to make recommendations one way or the other on the question of a State Bank. It was suggested that a small expert body should be appointed in India to study the whole question and it is understood that the Government of India have the question of appointing such a Committee presently under consideration.

Recent Progress.

The following statements shew the progress made by the three Banks within recent years:—

In Lakhs of Rupees.

BANK OF BENGAL.

—	Capital.	Reserve.	Govt. deposits.	Other deposits.	Cash.	Investments.	Dividend for year.
31st December.							
1890	200	47	226	666	639	206	9½ per cent.
1895	200	68	184	677	422	132	10 ,,
1900	200	103	155	582	243	136	11 ,,
1905	200	140	167	1204	396	181	12 ,,
1906	200	150	160	1505	528	149	12 ,,
1907	200	157	187	1573	460	279	12 ,,
1908	200	165	178	1575	507	349	13 ,,
1909	200	170	168	1760	615	411	14 ,,
1910	200	175	198	1609	514	368	14 ,,
1911	200	180	270	1677	729	321	14 ,,
1912	200	185	234	1711	665	310	14 ,,
1913	200	191	301	1824	840	319	14 ,,
1914	200	200	287	2160	1169	621	16 ,,
1915	200	*204	265	1978	785	798	16 ,,
1916	200	*213	274	2143	772	768	16 ,,

* Includes Rs. 63 lakhs as a reserve for depreciation of investments.

BANK OF BOMBAY.

1890	100	33	83	619	573	78	10 per cent.
1895	100	51	76	358	228	105	11 ,,
1900	100	70	87	432	129	89	11 ,,
1905	100	87	92	676	259	158	12 ,,
1906	100	92	101	832	354	177	12 ,,
1907	100	96	112	821	324	164	13 ,,
1908	100	101	94	832	377	149	13 ,,
1909	100	103	120	1035	415	163	13 ,,
1910	100	105	152	1053	436	149	14 ,,
1911	100	106	107	1104	463	208	14 ,,
1912	100	106	117	1124	315	210	14 ,,
1913	100	106	200	1015	477	232	14 ,,
1914	100	110	183	1081	646	202	15 ,,
1915	100	100	136	1079	423	276	15 ,,
1916	100	90	142	1367	667	312	15 ,,

BANK OF MADRAS.

	Capital.	Reserve.	Govt. deposits.	Other deposits.	Cash.	Investments.	Dividend for year.
1890	50	14	47	220	155	45	10½ per cent.
1895	50	16	45	278	144	45	10 "
1900	60	22	35	260	82	67	8 "
1905	60	30	41	344	140	71	10 "
1906	60	32	54	355	151	81	10 "
1907	60	36	35	416	162	84	10 "
1908	60	40	52	447	153	84	11 "
1909	60	44	49	500	141	79	12 "
1910	60	48	72	567	184	85	12 "
1911	60	52	59	625	165	104	12 "
1912	75	70	75	743	196	113	12 "
1913	75	73	86	805	219	117	12 "
1914	75	76	91	761	267	134	12 "
1915	75	65	86	803	256	184	12 "
1916	75	55	104	960	286	161	12 "

Note.—(The Banks have power under Sec. 36 (*l*) to draw Bills of Exchange payable out of India under certain stated circumstances, but this permission is of comparatively little importance.)

Branches.

BANK OF BENGAL.

Calcutta—
Harrison Road, Clive Street & Park Street.

Agra, Akyab, Allahabad, Benares, Cawnpore, Chittagong, Dacca, Delhi, Hyderabad Deccan, Jalpaiguri, Lahore, Lucknow, Moulmein, Nagpore, Narainguage, Patna, Rangoon, Secunderabad, Simla.

Pay Offices.

Chandpore, Serajgunge and Bombay (*Agency*).

BANK OF BOMBAY.

Bombay—
Mandvi and Sandhurst Road,

Ahmedabad, Akola, Amraoti, Broach, Hyderabad (Sind), Indore, Jalgaon, Karachi, Poona, Rajkot, Sholapur, Sukkur and Surat.

BANK OF MADRAS.

Alleppy, Bangalore, Bimlipatam, Calicut, Coconada, Cochin, Coimbatore, Colombo, Guntur, Madura, Mangalore, Masulipatam, Negapatam, Ootacamund, Salem, Tellicherry, Trichinopoly, Trivandrum and Tuticorin.

Out Stations.

Bezwada Erode, Narsapur, Rajahmundry and Vizianagram.

THE EXCHANGE BANKS.

The Banks carrying on Exchange business in India are merely branch agencies of Banks having their head offices in London, on the Continent, or in the Far East and the United States. Originally their business was confined almost exclusively to the financing of the external trade of India; but in recent years most of them, while continuing to finance this part of India's trade, have also taken an active part in the financing of the internal portion also at the places where their branches are situated.

At one time the Banks carried on their operations in India almost entirely with money borrowed elsewhere, principally in London—the home offices of the Banks attracting deposits for use in India by offering rates of interest much higher than the English Banks were able to quote. Within recent years however it has been discovered that it is possible to attract deposits in India on quite as favourable terms as can be done in London and a very large proportion of the financing done by the Exchange Banks is now carried through by means of money actually borrowed in India. No information is available as to how far *each* Bank has secured deposits in India but the following statement published by the Director-General of Statistics in India shows how rapidly such deposits have grown in the aggregate within recent years.

TOTAL DEPOSITS OF ALL EXCHANGE BANKS SECURED IN INDIA.

In Lakhs of Rupees.

1875	106
1880	339
1885	475
1890	753
1895	1030
1900	1050
1901	1183
1902	1370
1903	1614
1904	1632
1905	1704
1906	1808
1907	1917
1908	1951
1909	2027
1910	2479
1911	2816
1913	3103

Exchange Banks' Investments.

Turning now to the question of the investment of the Banks' resources, so far as it concerns India, this to a great extent consists of the purchase of bills drawn against imports and exports to and from India.

The financing of the import trade originated and is carried through however for the most

part by Branches outside of India, the Indian Branches' share in the business consisting principally in collecting the amount of the bills at maturity and in furnishing their other branches with information as to the means and standing of the drawees of the bills, and it is as regards the export business that the Indian Branches are more immediately concerned. The Exchange Banks have practically a monopoly of the export finance in India and in view of the dimensions of the trade which has to be dealt with the Banks would under ordinary circumstances require to utilise a very large proportion of their resources in carrying through the business. They are able however by a system of rediscount in London to limit the employment of their own resources to a comparatively small figure in relation to the business they actually put through. No definite information can be secured as to the extent to which rediscounting in London is carried on but the following figures appearing in the balance sheets dated 31st December 1916 of the undernoted Banks will give some idea of this.

LIABILITY ON BILLS OF EXCHANGE RE-DISCOUNTED AND STILL CURRENT.

	£
Chartered Bank of India	6,294,000
Eastern Bank, Ld.	676,000
Hongkong and Shanghai Banking Corporation.	8,365,000
Mercantile Bank of India, Ld. ..	2,964,000
National Bank of India, Ld... ..	5,645,000
	23,944,000

The above figures do not of course relate to re-discounts of Indian bills alone, as the Banks operate in other parts of the world also, but it may safely be inferred that bills drawn in India form a very large proportion of the whole.

The bills against exports are largely drawn at three months' sight and may either be "clean" or be accompanied by the documents relating to the goods in respect of which they are drawn. Most of them are drawn on well known firms at home or against credits opened by Banks or financial houses in England and bearing as they do an Exchange Bank endorsement they are readily taken up by the discount houses and Banks in London. Any bills purchased in India are sent home by the first possible Mail so that presuming they are rediscounted as soon as they reach London the Exchange Banks are able to secure the return of their money in about 16 or 17 days instead of having to wait for three months which would be the case if they were unable to rediscount. It must not be assumed however that all bills are rediscounted as soon as they reach London as at times it suits the Banks to hold up the bills in anticipation of a fall in the London discount rate while on occasions also the Banks prefer to hold the bills on their own account as an investment until maturity.

The Banks place themselves in funds in India for the purpose of purchasing export bills in a variety of ways of which the following are the principal:—

(1) Proceeds of import bills as they mature.
(2) Sale of drafts and telegraphic transfers payable in London and elsewhere out of India.
(3) Purchase of Council Bills and Telegraphic Transfers payable in India from the Secretary of State.
(4) Imports of bar gold and silver bullion.
(5) Imports of sovereigns from London, Egypt or Australia.

The remaining business transacted by the Banks in India is of the usual nature and need not be given in detail.

The following is a statement of the position of the various Exchange Banks carrying on business in India as at 31st December 1916.

In Thousands of £.

—	Capital.	Reserve.	Deposits.	Cash and Investment.
Chartered Bank of India	1200	1800	22703	10371
Comptoir National D' Escompte de Paris.	8000	1680	51000	11100
Eastern Bank, Ld.	600	55	3099	1570
Hongkong & Shanghai Bank	1500	3325	30306	8101
International Banking Corpn.	650	880	5100	2460
Mercantile Bank of India	562	600	8558	2857
National Bank of India	1000	1200	19551	5983
Russo Asiatic Bank (1912)	4745	2490	50880	11240
Yokohama Specie Bank	3000	2311	27477	8898
Sumitomo Bank	3000	210	15622	3963

JOINT STOCK BANKS.

Previous to 1906 there were few Banks of this description operating in India, and such as were then in existence were of comparatively small importance and had their business confined to a very restricted area. The rapid development of this class of Bank, which has been so marked a feature in Banking within recent years, really had its origin in Bombay and set in with the establishment of the Bank of India and the Indian Specie Bank in 1906. After that time there was a perfect stream of new flotations, and although many of the new Companies confined themselves to legitimate banking business, on the other hand a very large number engaged in other businesses in addition and can hardly be properly classed as Banks.

These Banks made very great strides during the first few years of their existence, but it was generally suspected in well informed circles that the business of many of the Banks was of a very speculative and unsafe character and it was a matter of no great surprise to many people when it became known that some of the Banks were in difficulties.

The first important failure to take place was that of the People's Bank of India and the loss of confidence caused by the failure of that Bank resulted in a very large number of other failures, the principal being that of the Indian Specie Bank.

The public have for the time being lost much of their confidence in this class of Bank and deposits to a very large extent have been withdrawn and it is feared that a large portion of the money has gone back into hoards. This is very unfortunate as many of the Banks, particularly the older established concerns, have always been recognised as being conducted on safe and prudent lines.

The following shows the position of the better known existing Banks as it appears in the latest available Balance Sheets :—

In Lakhs of Rupees.

—	Capital.	Reserve.	Deposits.	Cash and Investments.
Allahabad Bank, Ltd.	30	48	546	213
Alliance Bank of Simla, Ltd.	66	40	1000	431
Bank of Baroda, Ltd.	10	5	141	25
Bank of India, Ltd.	50	10	330	97
Bank of Mysore, Ltd.	10	1	57	17
Central Bank of India, Ltd.	15	1	218	103
Indian Bank, Ltd.	10	2	29	10
Karachi Bank, Ltd.	2	..	7	1
National Financing and Commission Corporation, Ltd.	9	..	12	5
Oudh Commercial Bank, Ltd.	5	3	12	3
Poona Bank, Ltd.	11	1	4	2
Punjab National Bank, Ltd.	16	11	110	51
Standard Bank, Ltd.	10	..	4	2

The principal Banks which have gone into liquidation during the last two or three years are given below along with a Statement of their Capital Reserve and deposits as at the date of the latest available Balance Sheets :—

In Lakhs of Rupees.

—	Capital.	Reserve.	Deposits.
Bank of Upper India (1912)	10	9	191
Bombay Banking Co.	1	..	15
Credit Bank of India, Ltd.	10	..	51
Deccan Bank, Ltd.	1	..	11
Indian Specie Bank, Ltd.	75	15	270
Kathiawad and Ahmedabad Banking Corporation	7	..	23
Lahore Bank, Ltd. (1912)	1	..	28
People's Bank of India, Ltd.	12	2	127
Punjab Co-operative Bank, Ltd. (1912)	7	2	60
The Pioneer Bank	3-84	..	1·96

Growth of Joint Stock Banks.

The following figures appearing in the Report of the Director-General of Statistics shews the growth of the Capital, Reserve and Deposits of the principal Joint Stock Banks registered in India :—

In Lakhs of rupees.

	Capital.	*Reserve.*	*Deposits.*
1870 ..	9	1	13
1875 ..	14	2	27
1880 ..	18	3	63
1885 ..	18	5	94
1890 ..	33	17	270
1895 ..	63	31	566
1900 ..	82	45	807
1905 ..	84	77	1198
1906 ..	133	56	1155
1907 ..	229	63	1400
1908 ..	239	69	1626
1909 ..	266	87	2049
1910 ..	275	100	2565
1911 ..	285	126	2529
1912 ..	291	134	2725
1913 ..	231	132	2259
1914 ..	251	141	1710
1915 ..	281	156	1787
1916 ..	287	173	2471

NATIVE PRIVATE BANKERS AND SHROFFS.

Native private Bankers and Shroffs flourished in India long before Joint Stock Banks were ever thought of, and it seems likely that they will continue to thrive for some very considerable time to come. The use of the word "Shroff" is usually associated with a person who charges usurious rates of interest to impecunious people, but this is hardly fair to the people known as "shroffs" in banking circles, as there is no doubt that the latter are of very real service to the business community and of very great assistance to Banks in India. Under present conditions the Banks in India can never hope to be able to get into sufficiently close touch with the affairs of the vast trading community in India to enable them to grant accommodation to more than a few of these traders direct, and it is in his capacity as middleman that the shroff proves of such great service. In this capacity also he brings a very considerable volume of business within the scope of the Presidency Banks Act, and enables the Presidency Banks to give accommodation which, without his assistance, the Banks would not be permitted to give. The shroff's position as an intermediary between the trading community and the Banks usually arises in something after the following manner. A Shopkeeper in the bazaar, with limited means of his own, finds that, after using all his own money, he still requires say Rs. 25,000 to stock his shop suitably. He thereupon approaches the shroff, and the latter after very careful inquiries as to the shopkeeper's position grants the accommodation, if he is satisfied that the business is safe. The business, as a rule, is arranged through a hoondee broker, and in the case referred to the latter may probably approach about ten shroffs and secure accommodation from them to the extent of Rs. 2,500 each. A hoondee usually drawn at a currency of about 2 months is almost invariably taken by the shroffs in respect of such advances.

A stage is reached however when the demands on the shroffs are greater than they are able to meet out of their own money, and it is at this point that the assistance of the Banks is called into requisition. The shroffs do this by taking a number of the bills they already hold to the Banks for discount under their endorsement, and the Banks accept such bills freely to an extent determined in each case by the standing of the shroff and the strength of the drawers. The extent to which any one shroff may grant accommodation in the bazaar is therefore dependent on two factors, *viz.*, (1) the limit which he himself may think it advisable to place on his transactions, and (2) the extent to which the Banks are prepared to discount bills bearing his endorsement. The shroffs keep in very close touch with all the traders to whom they grant accommodation, and past experience has shewn that the class of business above referred to is one of the safest the Banks can engage in.

The rates charged by the shroffs are usually based on the rates at which they in turn can discount the bills with the Banks and necessarily vary according to the standing of the borrower and with the season of the year. Generally speaking, however, a charge of two annas per cent. per mensem above the Bank's rate of discount, or 1½ % is a fair average rate charged in Bombay to a first class borrower. Rates in Calcutta and Madras are on a slightly higher scale due in a great measure to the fact that the competition among the saroffs for business is not so keen in these places as it is in Bombay.

The shroffs who engage in the class of business above described are principally Marwaries and Multanis having their head Offices for the most part in Bikanir and Shikarpur, respectively, the business elsewhere than at the Head Offices being carried on by "Moonims" who have very wide powers.

It is not known to what extent native bankers and shroffs receive deposits and engage in exchange business throughout India, but there is no doubt that this is done to a very considerable extent.

THE BANK RATE.

Each Presidency Bank fixes its own Bank rate, and the current rate of each Bank determines to a great extent the rates for all important classes of business within the Bank's sphere of influence. The rates in the three Presidencies are not always uniform, but it seldom happens that a difference of more than 1% exists, more particularly as regards Bombay and Bengal, which seem to be in closer touch with each other than appears to be the case with Madras.

The rate fixed represents the rate charged by the Banks on demand loans against Government securities only and advances on other securities or discounts are granted as a rule at a slightly higher rate. Ordinarily such advances or discounts are granted at from one-half to one per cent. over the official rate; but this does not always apply and in the monsoon months, when the Bank rate is sometimes nominal, it often happens that such accommodation is granted at the official rate or even less.

The following statement shews the average Bank rate of each Bank since 1881:—

Year.	Bank of Bombay.			Bank of Bengal.			Bank of Madras.		
	1st Half-year.	2nd Half-year.	Yearly average.	1st Half-year.	2nd Half-year.	Yearly average.	1st Half-year.	2nd Half-year.	Yearly average.
1881 ..	5.40	5.98	5.69	4.862	5.717	5.289			
1882 ..	8.08	4.13	6.10	8.177	5.022	6.599			
1883 ..	7.00	6. 2	6. 6	6.994	6.560	6.777			
1884 ..	9.03	4.17	6.60	8.818	3.946	6.379			
1885 ..	5.90	4.00	4.95	6.757	4.005	5.381			
1886 ..	6.35	6.50	6.42	5.928	6.152	6.037			
1887 ..	7.78	3.73	5.75	7.475	3.804	5.639			
1888 ..	5.90	5.51	5.70	5.736	5.185	5.460			5.60
1889 ..	9.46	4.00	6.73	9.309	4.674	6.991			6.86
1890 ..	9.21	3.28	6.24	8.265	3.315	5.790			5.74
1891 ..	3.88	2.23	3.05	3.502	2.022	3.062			2.92
1892 ..	3.97	3.04	3.50	3.884	3.114	3.499			3.54
1893 ..	5.97	3.84	4.90	5.685	4.076	4.880			5.27
1894 ..	7.55	3.46	5.50	7.425	3.364	5.394			5.00
1895 ..	4.30	3.60	3.95	5.066	3.592	4.329			4.25
1896 ..	5.85	5.10	5.47	5.774	5.608	5.691			5.62
1897 ..	10.11	5.64	7.87	9.884	5.967	7.925			7.97
1898 ..	12.03	4.55	8.29	11.016	5.114	8.065			7.78
1899 ..	6.34	5.42	5.88	6.337	5.494	5.915			6.05
1900 ..	6. 9	3.79	5.34	6.414	4.272	5.343			5.87
1901 ..	7.07	3.83	5.45	6.895	4.070	5.482	7.57	4.09	5.83
1902 ..	6.25	3.43	4.84	6.176	3.549	4.862	7.	4.02	5.51
1903 ..	6. 7	3.48	5.09	6.265	3.494	4.879	7.13	4.27	5.70
1904 ..	5.15	3.82	4.48	5.560	4.190	4.875	6.42	4.07	5.24
1905 ..	5.77	4.42	5.09	5.558	4.630	5.094	6.04	4.19	5.11
1906 ..	7.24	5.28	6.26	6.950	5.885	6.417	7.15	5.04	6.09
1907 ..	7.81	4.11	5.96	7.635	4.576	6.105	8.24	4.54	6.39
1908 ..	7.84	4.02	5.93	7.417	4.244	5.830	8.38	4.38	6.38
1909 ..	6.47	3.82	5.14	6.580	3.907	5.243	7.55	4.41	5.98
1910 ..	6.19	4.14	5.16	6.148	4.510	5.326	7.17	4.65	5.91
1911 ..	6.55	3.52	5.03	6.657	4.358	5.507	7.59	4.35	5.97
1912 ..	6.01	4.10	5.05	6.242	4.592	5.417	7.51	4.59	6.05
1913 ..	7.23	4.62	5.92	6.569	5.331	5.950	7.76	5.54	6.65
1914 ..	5.52	5·28	5·40	5.939	4·961	5.450	6.63	5·16	5·89
1915 ..	5.84			5·839			5·87		

Bank of Bombay.		Bank of Bengal.		Bank of Madras.	
Date.	Rate.	Date.	Rate.	Date.	Rate.
1904	Per cent.	1905	Per cent.	1902	Per cent.
February .. 11	7	February .. 23	7	January .. 14	6
,, .. 25	6	March .. 9	8	,, .. 20	7
March .. 10	5	,, .. 30	7	February .. 6	8
May .. 19	4				
		April .. 6	6	May .. 1	7
June .. 16	3	,, .. 14	5	,, .. 29	6
October .. 13	4	,, .. 27	4		
,, .. 20	5	July .. 20	3	June .. 12	5
				,, .. 30	4
1905		August .. 17	4	December .. 23	5
February .. 2	6	September .. 29	5		
,, .. 16	7				
March .. 9	8	November .. 30	6	1903	
,, .. 30	7	December .. 14	7	January .. 12	6
April .. 6	6			February .. 3	7
,, .. 14	5	1906		,, .. 10	8
		January .. 4	8	April .. 20	7
July .. 6	4	February .. 1	9		
,, .. 27	3			July .. 2	6
August .. 10	4	March .. 15	8	,, .. 13	5
		,, .. 22	7	,, .. 23	4
November .. 23	5			December .. 21	5
,, .. 30	6	April .. 5	6		
December .. 14	7	,, .. 12	5		
				1904	
1906		May .. 3	6	January .. 7	6
January .. 4	8	,, .. 17	7	,, .. 21	7
February .. 1	9	,, .. 24	6		
				May .. 16	6
March .. 15	8	June .. 7	5	,, .. 30	5
,, .. 22	7	,, .. 28	4		
,, .. 29	6	July .. 19	3	July .. 5	4
				December .. 22	5
April .. 26	7	August .. 9	4		
May .. 24	6	,, .. 23	5		
				1905	
June .. 21	5	September .. 13	6	January .. 23	6
July .. 12	4	,, .. 20	7	February .. 27	7
,, .. 9	3	October .. 11	6	March .. 13	8
August .. 9	4	November .. 15	7	April .. 3	7
September .. 12	5	,, .. 29	8	,, .. 14	6
		December .. 6	9		
November .. 15	6			May .. 8	5
,, .. 22	7			,, .. 29	6
,, .. 29	8	1907			
December .. 13	9	April .. 18	8	June .. 15	5
		,, .. 25	7	July .. 10	4
1907				December .. 18	6
March .. 7	8	May .. 2	6		
May .. 2	7	,, .. 16	5		
,, .. 9	6			1906	
		July .. 4	4	January .. 8	7
June .. 6	7	,, .. 25	3	,, .. 16	8
,, .. 20	6				
,, .. 27	5	September .. 12	4	April .. 4	7
July .. 4	4	,, .. 26	5	May .. 28	6
		November .. 7	6		
August .. 1	3			June .. 21	5
September .. 26	4			July .. 12	4
		1908			
November .. 7	5	January .. 4	7	September .. 17	5
December .. 12	6	,, .. 9	8	November .. 29	6

Bank of Bombay.		Bank of Bengal.		Bank of Madras.	
Date.	Rate.	Date.	Rate.	Date.	Rate.
1908	Per cent.	1908	Per cent.	1906	Per cent.
January .. 3	7	January .. 16	9	December .. 6	7
,, .. 9	8			,, .. 10	8
February .. 6	9	March .. 5	8		
		,, .. 26	7	1907	
March .. 19	8	May .. 21	6	January .. 16	9
,, .. 26	7			April .. 29	8
April .. 16	8	June .. 25	5	May .. 6	7
		July .. 2	4		
May .. 28	7	,, .. 16	3	June .. 24	6
June .. 25	6			July .. 1	5
		September .. 3	4		
July .. 2	5	November .. 5	5	July .. 8	4
,, .. 16	4	,, .. 26	6	November .. 4	5
,, .. 23	3				
October .. 22	4	1909		December .. 5	6
		January .. 14	7	,, .. 23	7
November .. 5	5	,, .. 28	8		
December .. 10	6	March .. 18	7	1908	
				January .. 9	8
1909		April .. 29	6	February .. 10	9
January .. 14	7	May .. 27	5		
May .. 13	6	June .. 17	4	May .. 18	8
				June .. 15	7
June .. 3	5	July .. 1	3	,, .. 25	6
,, .. 24	4	September .. 30	4		
July .. 15	3			July .. 7	5
		November .. 13	5	,, .. 14	4
November .. 4	4	December .. 9	6	November .. 30	5
,, .. 18	5			December .. 10	6
,, .. 25	6	1910			
		March .. 3	7	1909	
1910		May .. 12	6	January .. 12	7
March .. 3	7			,, .. 28	8
May .. 12	6	June .. 2	5		
		,, .. 16	4	June .. 1	7
June .. 2	5	,, .. 30	3	,, .. 17	6
,, .. 23	4			,, .. 28	5
		September .. 22	4	July .. 19	4
July .. 7	3	October .. 6	5		
October .. 6	4			November .. 16	5
		November .. 3	6	December .. 20	6
November .. 3	5	December .. 1	7		
,, .. 17	6			1910	
December .. 15	7	1911		January .. 4	7
		February .. 23	8	March .. 7	8
1911		March .. 30	7	May .. 13	7
May .. 18	6				
June .. 1	5	May .. 11	6	June .. 7	6
,, .. 21	4	June .. 1	5	,, .. 20	5
July .. 13	3	,, .. 15	4	July .. 4	4
October .. 19	4	August .. 3	3	November .. 8	5
December .. 21	5	,, .. 31	4	,, .. 18	6
		September .. 28	5		
1912				December .. 20	7
January .. 11	6	1912		,, .. 22	8
,, .. 18	7	January .. 11	6		
		,, .. 18	7	1911	
February .. 1	8	,, .. 26	8	May .. 23	7
,, .. 22	7			June .. 7	6
		March .. 7	7		
March .. 20	6	,, .. 21	6	,, .. 19	5
May .. 9	5	May .. 23	5	July .. 7	4

Bank of Bombay.		Bank of Bengal.		Bank of Madras.	
Date.	Rate.	Date.	Rate.	Date.	Rate.
	Per cent.		Per cent.		Per cent.
1912		1912		1911	
June .. 13	4	June .. 20	4	November .. 14	5
July .. 11	3	July .. 11	3	December .. 21	6
October .. 3	4	September .. 13	4		
November .. 14	5	October .. 3	5	1912	
„ .. 28	6	November .. 14	6	January .. 9	7
December .. 12	7	„ .. 28	7	„ .. 29	8
„ .. 27	8			May .. 29	7
		1913		June .. 17	6
1913				„ .. 24	5
		January .. 9	8	July .. 8	4
April .. 3	7	February .. 13	7	November .. 12	5
May .. 29	6	April .. 17	6	December .. 2	6
June .. 12	5	June .. 5	5	„ .. 9	7
July .. 3	4	„ .. 19	4	„ .. 30	8
„ .. 17	3				
August .. 7	4	July .. 3	3	1913	
September .. 10	5	August .. 7	4		
October .. 10	6	„ .. 28	5	June .. 4	7
„ .. 31	5	September .. 18	6	„ .. 16	6
		November .. 13	7	July .. 8	5
1914					
		1914			
January .. 15	6				
May .. 21	5	March 19	6	October .. 1	6
		May .. 1	5		
June .. 4	4				
„ .. 25	3	June .. 4	4		
		July .. 9	3		
August .. 6	4			1914	
„ .. 13	5	August .. 6	5		
„ .. 20	6	November .. 5	6	January .. 2	7
				May .. 25	6
1915					
		1915		June .. 8	5
June .. 2	5			„ .. 23	4
November .. 4	6	June .. 2	5		
		September .. 23	6	August .. 21	5
				October .. 12	6
1916					
				1915	
January .. 6	7	1916			
„ .. 13	8				
		January .. 1	7	June .. 7	5
April .. 13	7	„ .. 20	8	October .. 4	6
May .. 25	6				
		April .. 14	7	December .. 20	7
June .. 15	5	June .. 1	6		
July .. 13	4				
		„ .. 22	5		
August .. 17	5	September .. 14	6	1916	
October .. 5	6				
		October .. 12	7		
November .. 23	7	November .. 9	8	January .. 17	8
„ .. 30	8			June .. 5	7
				„ .. 19	6
1917		1917			
				October .. 30	7
February .. 22	7	February .. 22	7		
March .. 15	6	March .. 15	6	December .. 4	8

BANKERS' CLEARING HOUSES.

The principal Clearing Houses in India are those of Calcutta, Bombay, Madras, and Karachi, and of these the first two are by far the most important. The members at these places consist of the Presidency Banks, most of the Exchange Banks and English Banking Agency firms, and a few of the better known of the local Joint Stock Banks. No Bank is entitled to claim to be a member as of right and any application for admission to a Clearing must be proposed and seconded by two members and be subject thereafter to ballot by the existing members.

The duties of settling Bank are undertaken by the Presidency Bank at each of the places mentioned and a representative of each member attends at the office of that Bank on each business day at the time fixed to deliver all cheques he may have negotiated on other members and to receive in exchange all cheques drawn on him negotiated by the latter. After all the cheques have been received and delivered the representative of each Bank advises the settling Bank of the difference between his total receipts and deliveries and the settling Bank thereafter strikes a final balance to satisfy itself that the totals of the debtor balances agrees with the total of the creditor balances. The debtor Banks thereafter arrange to pay the amounts due by them to the settling Bank during the course of the day and the latter in turn arranges to pay on receipt of those amounts the balances due to the creditor Banks. In practice however all the members keep Bank accounts with the settling Bank so that the final balances are settled by cheques and book entries thus doing away with the necessity for cash in any form.

The figures for the Clearing Houses in India above referred to are given below :—

Total amount of Cheques Cleared Annually.

In lakhs of Rupees.

——	Calcutta.	Bombay.	Madras.	Karachi.	Total.
1901	Not available	6,511	1,338	178	8,027
1902	....	7,013	1,295	268	8,576
1903	....	8,762	1,464	340	10,566
1904	....	9,492	1,536	365	11,393
1905	....	10,927	1,560	324	12,811
1906	....	10,912	1,583	400	12,895
1907	22,444	12,645	1,548	530	37,167
1908	21,281	12,585	1,754	643	36,263
1909	19,776	14,375	1,948	702	36,801
1910	22,288	16,652	2,117	755	41,762
1911	25,763	17,605	2,083	762	46,213
1912	28,831	20,831	1,152	1,159	52,835
1913	33,133	21,890	2,340	1,219	58,582
1914	28,031	17,696	2,127	1,315	49,169
1915	32,266	16,462	1,887	1,352	51,967
1916	48,017	24,051	2,495	1,503	76,066

Government of India Rupee Loans.

The following are the Loans in the hands of the public still extant, all the others having been extinguished either by conversion or by discharge:—

(1)	Three & a half per cent. loan of	1842–43
(2)	Ditto	1854–55
(3)	Ditto	1865
(4)	Ditto	1879
(5)	Three per cent. loan of	1896–97
(6)	Three & a half per cent. loan of	1900–01
(7)	4 per cent. Terminable loan of	1915–16
(8)	4 per cent. Conversion loan of	1916–17
(9)	5 per cent. War Loan of	1917
(10)	5½ per cent. War Bonds of	1917

The first four of these loans were made repayable at the option of Government on or after 31st July 1904 on three months' notice being given so that the position now as regards these loans is that Government are at liberty to discharge them at any time on giving three months' notice. In view however of the necessity of fresh borrowings by Government this power is not likely to be exercised for some considerable time to come.

The 3½ per cent. Loan of 1900–01 is repayable, also at the option of Government, on or after 31st December 1920 on three months' notice being given and all loans issued since the year 1900 have been included in and form part of the 1900–01 loan.

In 1896 Government resolved in view of the easy condition of the money market to try the experiment of borrowing at 3 per cent. and the loan of Rs. 4 crores raised in that year was accordingly issued bearing that rate of interest. The opportunity was also taken to advertise for discharge the two 3½ per cent. loans of 1853-54 and 1893–94 but proprietors of these loans were given the option of transferring their holdings to the new 3 per cent. loan. The Rs. 4 crores loan was successfully floated and appeared to be a great success but it was soon seen that the public had no use for a 3 per cent. security and Government have never repeated the attempt to borrow at 3 per cent. The successful tenderers for the loan of 1896–97 experienced great difficulty in disposing of any part of their holdings and as through course of time the notes became practically unmarketable it was generally felt that Government must do something to improve the market for the notes. Various proposals were submitted to Government with this end in view but the latter delayed taking any action in the matter until the year 1908. Such action took the form of giving holders the option of converting their 3 per cent. notes into 3½ per cent. notes of the 1900–01 loan on the following terms:—

(1) If the face value of the 3 per cent. notes tendered for conversion is an exact multiple of Rs. 700 the tenderer will receive in exchange 3½ per cent. notes for 6-7ths of such face value.

(2) If the face value of the 3 per cent. notes tendered for conversion does not form an exact multiple of Rs. 700 the tenderer has the option of receiving—

(*a*) 3½ per cent. notes equivalent to the nearest lower multiple of Rs. 700 calculated as in Clause 1 together with the difference in 3 per cent. notes, or

(*b*) 3½ per cent. notes of the nearest higher equivalent face value in hundreds calculated as in Clause 1 on payment in cash of the difference between (i) 6-7ths of the face value of the 3 per cent. notes tendered and (ii) the face value of the 3½ per cent. notes received in exchange.

The above offer is still in force but Government have reserved the right to withdraw it at any time on giving 6 months' notice. The balance of the 3 per cent. loan stood at Rs. 10,95 lacs on 31st March 1897, at Rs. 11,07 lacs on 30th September 1908 at Rs. 8,42 lacs on 31st March 1913 and at Rs. 7,26 lacs on 31st March 1917. The work connected with the payment of interest, &c., on Government loans is entrusted to the Presidency Banks in the 3 Presidency towns, to the District Treasuries elsewhere in India, and to the Bank of England in London.

The 4 per cent. Terminable Loan of 1915-1916 was issued at par in August 1915 and the Loan if not previously redeemed will be repaid at par on 30th November 1923, Government however reserves the right to redeem the loan or any part of it at any time on or after the 30th November 1920 on giving three months' notice. A new departure was made when issuing this loan—the public were permitted to make applications through the Post Office for sums not exceeding Rs. 5,000. Such applications received allotment in full. The offer remained open until 30th Oct., and resulted in a further subscription of forty-four lakhs.

The 4 per cent. Conversion Loan of 1916-17 was issued at par in June 1916 and the total tenders, exclusive of those received through the Post Office, amounted to Rs. 6,35 lacs, all of which were accepted by Government. Allotments of this loan carried with them the right to convert an equivalent amount of 3½ per cent or 3 per cent. securities into the 4 per cent. Loan at the rates of 96 per cent. and 82½ per cent. respectively.

The Loan of 1917 was for an unlimited amount and was raised for the special purpose of paying a portion of India's gift of 100 million pounds towards the cost of the War.

The issue was made in various forms, *viz*:—

5% War Loan payable 1929-47 issued at 95%.
5½% War Bonds payable 1920
Do. do. 1922

Post Office 5-year cash certificates.

Applicants for the 5% Loan secured for every Rs. 100 of the 5% Loan applied for the right to convert Rs. 150 of other loans as follows:—

3% Loan converted at 65 for every Rs. 150 nominal.

3½% Loan converted at 76 for every Rs. 150 nominal.

4% Conversion Loan at 92 for every Rs. 150 nominal.

The total amount subscribed towards the War Loan up to the end of August was roughly Rs. 50 crores.

Government debt may be held in the form of promissory notes or Stock Certificates but Notes or Certificates can only be issued in even hundreds of rupees. Promissory notes are transferable by endorsement and as such transfers do not require to be registered it follows that Government do not keep any record of the holders of such notes from time to time. A holder of a Stock Certificate is a registered holder however and transfers can only be made by transfer deed which must be submitted to and approved of by the authorities conducting the loan business on behalf of Government.

The question of issuing Bearer Bonds with or without coupons attached, is presently being considered by Government and it seems likely that this form of security will be issued in the near future.

Interest is payable half-yearly on each loan on the dates noted below.

Loan of 1842–43	1st Febry. & 1st August.
Loan of 1854–55	30th June & 31st Decr.
Loan of 1865	1st May & 1st Novr.
Loan of 1879	16th Jany. & 16th July.
Loan of 1896–97	30th June & 31st Decr.
Loan of 1900–01	30th June & 31st Decr.
4% Loan of 1915–16	1st June & 1st Decr.
4% Loan of 1916–17	1st Apl. & 1st Oct.
5% & 5½% Loans of 1917	15th Feb. & 15th Aug.

Interest may be made payable at the option of the holder at the Public Debt Office Banks of Bengal, Bombay or Madras, at any Government Treasury, or at the Bank of England, London. In the case of Promissory Notes, presentation of the notes at the office where interest is payable is necessary before interest can be drawn but this does not apply as regards Stock Certificates and interest warrants in respect of these are sent out to the registered holder as soon as interest falls due. The interest on notes enfaced to London is paid by rupee drafts on India.

Renewal, Conversion, Consolidation and Sub-Division of Promissory Notes.

Renewal.

When all the spaces reserved for endorsements on the reverse of a note have been filled up or when the spaces utilised for recording payments of interest have been exhausted the note requires to be renewed before any farther transfers can be allowed or interest drawn. The fee for such renewal is at the rate of ¼ per cent. on the face value of the note subject to a maximum of Re. 1 for each note but no renewal fee is charged in the case of a note on which no endorsements appear when the interest charges are expended.

Conversion.

Promissory Notes of the 3½ per cent. loans of 1842–43, 1854–55, 1865, 1879 and 1900–01 may be transferred to any other of those loans except that no transfer to the loan of 1900–01 from any of the other loans is admissible.

It is made a condition however before any such transfer is permitted that a full half-year's interest is due on the Promissory Note at the time it is presented for transfer.

The fees charged are the same as those applicable to renewals.

Consolidation and Sub-Division.

Notes of the same loan, on which interest has been paid up to the same date, may be consolidated or notes may be sub-divided into others of smaller denominations, but of the same loan, at the option of the proprietors, notes only being issued for Rs. 100 or multiples of Rs. 100.

The fee charged is at the rate of ¼ per cent. on the face value of the new notes received, subject to a maximum of Re. 1 for each note.

The management of the debt in England is entrusted to the Bank of England who are paid commission at the rate of £300 per million pounds in respect of the sterling debt and £400 per crore of rupees in respect of the rupee debt. The charge for the latter is however subject to a minimum of £8,000.

Quotations for 3½ per cent. Government of India Loans.

Jany.	*Rupee Loan.* Rs.	*Sterling Loan.* £
1895 ..	103·6 per cent.	112¾ per cent.
1896 ..	105·7 ,,	117 ,,
1897 ..	98 ,,	118½ ,,
1898 ..	95·13 ,,	117 ,,
1899 ..	94 ,,	116½ ,,
1900 ..	95·10 ,,	110 ,,
1901 ..	96 ,,	108 ,,
1902 ..	95·14 ,,	108 ,,
1903 ..	97·9 ,,	107 ,,
1904 ..	95·2 ,,	103 ,,
1905 ..	98·1 ,,	106¼ ,,
1906 ..	97·14 ,,	105½ ,,
1907 ..	95·7 ,,	104 ,,
1908 ..	96·3 ,,	102½ ,,
1909 ..	94·11 ,,	99 ,,
1910 ..	93·7 ,,	98½ ,,
1911 ..	95·1 ,,	95½ ,,
1912 ..	96·2 ,,	94 ,,
1913 ..	94·9 ,,	91.7–16 ,,
1914 ..	95·10 ,,	85¼ ,,
1915 ..	81 (Dec.) ,,	Nominal.
1916 ..	75·8 (Sept.) ,,	70¼ per cent.
1917 (Aug.)	69 ,,	66½ ,,

AN INDUSTRIAL BANK.

In the course of the evidence taken by the Industrial Commission great stress was laid on the importance of establishing Industrial Banks in India in order to finance new industries, demanding longer term loans than can be given by joint stock banks working chiefly on short deposits. In most of this evidence it was laid down that some form of Government support must be given. Whilst this evidence was being taken Messrs. Tata Sons & Co. of Bombay launched a scheme for an industrial bank on a very big scale. The authorised capital of this bank is Rs. 12 crores of which about Rs. 8 crores have been issued and the whole of this was subscribed without any appeal to the public. A strong directorate was appointed and the bank is expected to open business in the early part of 1918.

In a circular explaining the aims and objects of the new undertaking Messrs. Tata Sons & Co. laid great stress on the part which industrial banks have played in financing the industries of Germany and of Japan. They explained that they expected an English financial group to take up a considerable portion of the intended capital which will give the Bank the advantage of direct connection with the money market. In explaining the scope of the Bank they said. "The proposed bank will do all ordinary and exchange business as is done by the present banks, but its special business and object will be to finance and assist the development of existing and new industries, and as incidental thereto, make advances to, and underwrite the debentures issued by such concerns for their working capital, and grant accommodation against block accounts. The bank will have an up-to-date intelligence section, and a competent staff of experts, scientific and commercial, to study and report on Industrial schemes brought to its attention. Any scheme which the bank may place before the public will, therefore, have the great advantage of having been carefully studied and scrutinised, not only from its technical but also from its financial side, and in its relation to and bearing on the market all over the world and will, *ipso facto*, be worthy of financial support by our capitalists and the general public. There is, therefore, every reason to anticipate that this side of the bank's business—the underwriting of Industrial issues—will prove a safe and profitable business."

FAILURES OF INDIAN BANKS.

In the Indian Year Book for 1915 a full account was given of the disastrous failures of Indian banks, which commenced in 1913 and were continued throughout the greater part of the following year. Further, the statistical position of all these banks was set out in tables. For complete details of this painful episode in the financial history of the country reference must be made to that volume. The results of this acute commercial crisis are summarised below, and the liquidators' reports of the principal bank that failed, the Indian Specie Bank of Bombay, are appended.

During the year 1915, 11 banks failed with an aggregate paid-up capital of Rs. 4,60,000 as against 43 banks with an aggregate paid-up capital of Rs. 1,09,12,000 during the year 1914.

No.	Name or Company.	Capital.			Amount of Deposits.	Date of going into liquidation.
		Authorised.	Subscribed.	Paid-up.		
	PUNJAB.	Rs.	Rs.	Rs.	Rs.	1915
1	Indian Banking Co., Lahore	5,00,000	27,850	6,568	607	4th August.
2	Amritsar National Banking Co., Amritsar	10,00,000	1,38,000	1,07,890	1,07,658	4th July.
3	New Doaba Bank, Amritsar	5,00,000	....	....	....	24th Jan.
	Total, Punjab ..	20,00,000	1,65,850	1,14,458		
	BOMBAY.					
1	Sind Bank	25,00,000	3,26,700	82,295	....	11th Jan.

No.	Name of Company.	Capital. Authorised.	Capital. Subscribed.	Capital. Paid-up.	Amount of Deposits.	Date of going into liquidation.
	UNITED PROVINCES.	Rs.	Rs.	Rs.	Rs.	1915.
1	Kashmiri Bank, Fyzabad	1,00,000	1,00,000	1,00,000	....	13th Dec.
2	Bharat Bank, Meerut	1,00,000	52,200	52,200	....	4th August.
3	United India Bank, Allahabad	5,00,000	39,104	26,733	....	5th Jan.
4	Cawnpore Banking Co., Cawnpore	2,00,000	17,080	14,528	....	24th July.
	Total, United Provinces	9,00,000	2,08,384	1,93,461	....	
	BANGALORE.					
1	Rajdhany Bank	80,000	13,750	10,404	....	15th Jan.
2	Bangalore Cantonment Trading and Banking Co.	20,000	6,100	6,100	....	9th April.
3	Bangalore Cantonment Cavalry Road Savings Bank	1,50,000	69,775	53,114	23,532	25th April.
	Total, Bangalore	2,50,000	89,625	69,618	....	
	GRAND TOTAL	56,50,000	7,90,559	4,59,832	....	

Abstract Statement of Companies incorporated in British India and the Mysore State and registered in the six months, April to September, 1917, as compared with those in the corresponding months of the preceding year.

Classification of Companies.	1917 (April to September.) Number of Companies.	1917 (April to September.) Aggregate authorised Capital.	Classification of Companies.	1917 (April to September.) Number of Companies.	1917 (April to September.) Aggregate authorised Capital.
		(Rs. 1,000)			
Banking and Loan	20	1,915	Paper Mill	1	2,00
Insurance	..	..	Rice Mills	2	1,70
Railways and Tramways	3	28,00	Flour Mill	..	..
Shipping, Landing, and Warehousing	1	5,00	Other Mills and Presses	1	15,00
Co-operative Association	1	2,50	Tea Planting	15	34,93
Printing, Publishing and Stationery	8	3,90	Coffee and Cinchona	1	3,00
Trading other than Railways, Shipping, Co-operative Association, Printing, etc.	42	1,26,32	Planting other than tea, coffee, and cinchona	4	5,48
Cotton Mills	..	..	Coal Mining	5	14,00
Jute Mills	..	..	Mining and Quarrying other than Coal	4	46,50
Mill for wool, silk, hemp, etc.	1	1,00	Land and Building	1	1,00
Cotton and Jute Screws and Presses	1	2,00	Brewery	1	6,88
			Ice Manufacturing	1	60
			Companies other than those specified above	6	32,35
			Total	119	3,51,31

The War and Prices.

Whole sale prices in markets throughout India as compared with prices prevailing at the outbreak of War.

Article.	Rate per	Prices.				Index Numbers (Prices for July 1914=100).				Prices in March 1917 expressed in Index Numbers (March 1916 =100).
		July 1914.	March 1915.	March 1916.	March 1917.	July 1914.	March 1915.	March 1916.	March 1917.	
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.					
Rice 1	Maund of 82⅔ lbs.	5 8 2	4 13 9	2 13 9	4 7 10	100	88	88	81	92
Wheat 2	,,	4 2 3	5 0 0	3 15 0	4 5 0	100	121	95	104	110
Barley 3	,,	3 1 1	3 2 6	3 0 0	2 15 4	100	103	98	96	99
Jawar 4	,,	3 4 2	3 0 7	4 12 0	2 11 11	100	93	84	84	100
Bajra 5	,,	3 13 6	3 7 0	3 6 1	2 12 3	100	89	88	72	82
Maize 6	,,	3 5 4	3 5 1	2 8 0	2 9 4	100	99	75	77	103
Gram 7	,,	3 2 11	3 12 10	3 2 0	3 5 3	100	100	82	87	106
Arhar dal 8	,,	5 7 2	5 12 0	5 5 10	4 11 0	100	106	98	86	87
Linseed 9	,,	5 11 10	5 0 0	5 2 7	5 7 7	100	87	90	95	106
Mustard and Rape seed 10	,,	6 5 3	4 11 10	4 11 7	4 10 0	100	75	75	73	98
Sesamum 11	,,	8 0 2	6 1 2	5 12 0	6 2 0	100	76	72	76	107
Cotton (raw) 12	,,	20 0 0	13 10 0	19 0 0	27 8 0	100	68	95	137	145
Jute (raw) 13	,,	9 0 0	6 0 0	7 8 0	7 8 0	100	67	83	83	100

1 Average of 34 markets (7 in Bengal, 7 in Burma, 7 in the United Provinces, 4 in Bihar and Orissa, 2 in Madras, 3 in Assam and 1 each in Bombay, Punjab, Delhi and North-West Frontier Province).

2 Average of 37 markets (8 in the United Provinces, 7 in the Punjab, 5 in Bihar and Orissa, 4 each in Bombay and the Central Provinces and Berar, 2 in Burma, and 1 each in Delhi North-West Frontier, Baluchistan and Bengal, and the 3 ports—Calcutta, Bombay and Karachi).

3 Average of 16 markets (5 in the United Provinces, 3 each in the Punjab and Bihar and Orissa, 2 in Bombay, 1 each in Delhi, North-West Frontier and Baluchistan).

4 Average of 37 markets (8 in the United Provinces, 7 in Bombay, 4 each in the Punjab Central Provinces and Berar and Madras, 2 each in North-West Frontier and Mysore, 1 each in Sind, Bihar, Delhi, Burma, Rajputana and Baluchistan).

5 Average of 23 markets (5 each in the Punjab and Bombay, 4 in the United Provinces, 3 in Madras, 2 in North-West Frontier, 1 each in Sind, Bihar, Delhi and Rajputana).

6 Average of 19 markets (6 in the Punjab, 5 in the United Provinces, 3 in Bihar, 1 each in Burma, North-West Frontier, Delhi, Baluchistan and Rajputana).

7 Average of 29 markets (5 in the United Provinces, 4 each in the Punjab, Bombay, Central Provinces and Berar, and Bihar, and Orissa, 3 in Bengal, 2 in Burma, and 1 each in Madras, Delhi, and North-West Frontier Province).

8 Average of 29 markets (4 each in Bengal United Provinces, Bihar and Orissa, and Central Provinces and Berar, 3 in Madras, 2 each in Bombay, Punjab and Burma and 1 each in Assam, Delhi, North-West Frontier and Baluchistan).

9 Average of 22 markets (5 in the United Provinces, 4 in the Punjab, 3 each in Bengal, and Central Provinces and Berar, 2 each Bombay, Bihar and in Orissa, and Assam and 1 in Delhi).

10 Average of 20 markets (5 in the United Provinces, 4 in Bengal, 3 each in the Punjab and Bihar and Orissa, 2 in Assam, 1 each in North-West Frontier, Central Provinces and Delhi).

11 Average of 15 markets (3 each in the United Provinces, Bihar & Orissa, Punjab & the Central Provinces and Berar, 2 in Madras & 1 in Delhi).

12 Average of 15 markets (3 each in the Punjab and the United Provinces, 2 each in Bengal, Bihar and Orissa and Central Provinces and Berar, 1 each in Delhi, Madras and North-West Frontier).

13 Average of 6 markets (4 in Bengal and 2 in Bihar and Orissa).

The School of Oriental Studies.

This School was established by Royal Charter in June 1916. The purposes of the School (as set out in the Charter) are to be a School of Oriental Studies in the University of London to give instruction in the languages of Eastern and African peoples, Ancient and Modern, and in the Literature, History, Religion, and Customs of those peoples, especially with a view to the needs of persons about to proceed to the East or to Africa for the pursuit of study and research, commerce or a profession, and to do all or any of such other things as the Governing Body of the School consider conducive or incidental thereto, having regard to the provision for those purposes which already exists elsewhere and in particular to the co-ordination of the work of the School with that of similar institutions both in this country and in our Eastern and African Dominions and with the work of the University of London and its other Schools.

The aims of the School may be summarized briefly as follows: (i) To provide a great University centre for Oriental and African studies and research; (ii) to provide training in Languages, Literature, History, Religions, and Customs, for military and civil officers of Government and for any other persons about to proceed to Africa and the East for commercial or other enterprises.

The School has been created as the outcome of the Reports of two Government Committees, the first a Treasury Departmental Committee presided over by Lord Reay, the second an India Office Departmental Committee presided over by Lord Cromer. The School is intended to provide London with a centre for Oriental teaching adequate to the needs of the metropolis and of the Empire, and one that will remove the reproach that London has hitherto been without an Oriental School comparable to those of Paris, Berlin, and Petrograd.

The initial ***scheme of teaching*** *of Modern* Oriental Languages recommended by Lord Reay's Committee for the School is as follows:

Group I.—NEAR EAST: *Turkish, Arabic and Persian.*—One Professor, two Readers, three Native Assistants.

Group II.—NORTHERN AND EASTERN INDIA: *Hindi and Hindustani and Bengali.*—One Professor, one Reader, two Native Assistants.

Group III.—WESTERN INDIA: *Marathi and Gujarati.*—One Professor, one Reader (or two Readers), two Native Assistants.

Group IV.—SOUTHERN INDIA: *Tamil and Telugu and Kanarese.*—One Professor, one Reader, three Native Assistants.

Group V.—FURTHER INDIA, MALAY ARCHIPELAGO, ETC. *Burmese.*—One Reader, one Native Assistant. *Malay.*—One Reader, one Native Assistant.

Group VI.—FAR EAST: *Chinese.*—One Professor, one Native Assistant. *Japanese.*—One Professor, one Native Assistant.

Group VII.—AFRICA: *Swahili.*—One Reader, one Native Assistant. *Hausa.*—One Reader, one Native Assistant.

The Reay Committee further recommended that £1,000 a year should be spent in teaching the following languages or groups of languages, Armenian, Assamese, Panjabi, Tibetan, Pashto, Sinhalese, Siamese, Melanesian languages, Polynesian languages, Amharic, Luganda, Somali, Yoruba, Zulu. The Committee also recommended that provision should be made in the School for the teaching of classical Oriental studies, *e.g.*, Sanskrit and Palli. Not only the languages, but the history, customs, and religions of the peoples who speaks them will be taught in the School.

The Governing Body are negotiating with the University of London for the transfer to the School of the Oriental teaching hitherto provided at University and King's Colleges.

The School possesses noble and adequate **buildings**, provided for them by Government under the London Institution (Transfer) Act of 1912. The sum of £25,000 required for the alteration and extension of the buildings of the London Institution for the purposes of the School was voted by Parliament. The School buildings are quiet, although they are in the heart of the City. They are only two minutes' walk from the termini of the Great Eastern and Central London Railways and from Moorgate Street Station on the Metropolitan Railway, and about six minutes' walk from the Bank of England. The School was formally opened by the King on 23rd February, 1917, and the first Bulletin of the School (price 6*s.*) was published later in the year.

Finances.—An appeal for an endowment fund was issued in October, 1916, which states that The Berlin School of Oriental Languages had, before the War, an income of £10,000: the income required for the School in London, of which the scope is necessarily more extended, is £14,000. Of this sum the School has at present in view an income of about £7,500, including grants from the Imperial Government and the Government of India. The Committee desire to raise an Endowment Fund of £150,000 for this purpose, towards which they have as a result of a preliminary appeal (which was suspended in August, 1914), about £10,000.

Patron, H. M. the King. *Chairman of the Governing Body*, Sir John Hewett. *Honorary Secretary*, P. J. Hartog, Esq., C.I.E.

Agriculture.

As crops depend on the existence of plant food and moisture in the soil so the character of the agriculture of a country depends largely on its soil and climate. It is true that geographical situation, the character of the people and other considerations have their influence which is not inconsiderable, but the limitations imposed by the nature of the soil and above all by the climate tend to the production of a certain class of agriculture under a certain given set of conditions.

The climate of India, while varying to some extent in degree, in most respects is remarkably similar in character throughout the country. The main factors in common are the monsoon, the dry winter and early summer months, and the intense heat from March till October. These have the effect of dividing the year into two agricultural seasons, the *Kharif* or Monsoon and the *Rabi* or Winter Season each bearing its own distinctive crops. From early June till October abundant rains fall over the greater part of the continent while the winter months are generally dry although North-Western India benefits from showers in December and January. The distribution of the rainfall throughout the year, which is of considerable importance to agriculture, is none too favourable, but is not quite so bad as is often represented. The rainfall is greatest at what would otherwise be the hottest time of the year, *viz.*, mid-summer and when it is most needed. It should be remembered that in a hot country intermittent showers are practically valueless as evaporation is very rapid. The distribution of rainfall such as is common in England, for example, would be of little use to Indian soils.

Soil.—For the purpose of soil classification India may be conveniently divided into two main areas in (1) The Indo-Gangetic plains, (2) Central and Southern India. The physical features of these two divisions are essentially different. The Indo-Gangetic plains (including the Punjab, Sind, the United Provinces, Bengal, Bihar and Assam) form large level stretches of alluvium of great depth. The top soil varies in texture from sand to clay, the greater part being a light loam, porous in texture, easily worked, and naturally fertile. The great depth of the alluvium tends to keep down the soil temperature. Central and Southern India on the other hand consist of hills and valleys. The higher uplands are too hot and too near the rock to be suitable for agriculture which is mainly practised in the valleys where the soil is deeper and cooler and moisture more plentiful. The main difference between the soils of the two tracts is in texture and while the greater part of the land in Northern India is porous and easily cultivated, and moist near to the surface large stretches in Southern and Central India consist of an intractable soil called the Deccan trap, sticky in the rains, hard and crumbly in the dry weather and holding its moisture at lower levels.

Agricultural Capital and Equipment.—India is a country of small holdings and the vast majority of the people cultivate patches varying in size from one to eight acres. Large holdings are practically unknown, and are mainly confined to European planters. Farming is carried on with a minimum of capital, there being practically no outlay on fencing, buildings, or implements. The accumulation of capital is prohibited by the occurrence of famine and the high rate of interest and extravagance of expenditure in marriage celebrations. The organization of co-operative credit which has been taken in hand by Government and which has already proved successful in many provinces will undoubtedly lead to an increase in Agricultural capital.

Equipment.—For power the ryat depends chiefly on cattle which, as a rule, are light and active but possess little hauling power. The necessary tilth for crops is brought about by frequency of ploughings, the result being that the soil is seldom tilled as it should be. This is not due in any way to want of knowledge on the part of the people but through want of proper equipment. The Indian Agriculturist, as a rule, possesses an intimate knowledge of the essentials of his own business, and fails through lack of ways and means.

Implements are made of wood although ploughs are usually tipped with iron points and there is a great similarity in their shape and general design. The levelling beam is used throughout the greater part of the country in preference to the harrow and roller; and throughout Northern India the plough and the levelling beam are the only implements possessed by the ordinary cultivator.

In the heavier soils of the Deccan trap a cultivating implement consisting of a single blade, resembling in shape a Dutch hoe, is much used. Seed drills and drill hoes are in use in parts of Bombay and Madras but throughout the greater part of the country the seed is either broadcasted or ploughed in. Hand implements consist of various sizes of hoes, the best known of which are the *kodal* or spade with a blade set at an angle towards the labourer who does not use his feet in digging, and the *khurpi* or small hand hoe. Of harvesting machinery there is none, grain is separated either by treading out with oxen or beating out by hand, and winnowing by the agency of the wind.

Cultivation.—Cultivation at its best is distinctly good but in the greater part of the country it has plenty of room for improvement. As in any other country success in agriculture varies greatly with the character of the people, depending largely as it does on thrift and industry. In most places considering the large population cultivation is none too good. Agriculture suffers through lack of organization and equipment. Owing to the necessity of protection against thieves, in most parts the people live in villages, many of them at considerable distances from their land. Again, holdings, small though they are, have been sub-divided without any regard for convenience. Preparatory tillage generally consists of repeated ploughings, followed as seed time approaches by harrowings with the levelling beam. The *Rabi* crops generally receive a more thorough cultivation than the *Kharif*, a finer seed bed being necessary owing to the dryness of the growing season. Manure is

AGRICULTURAL PRODUCE.

The following table shows the area under the principal crops, in British India, and their territorial distribution, for 1915-16. The cropped area is always greater than the area of cultivated land, owing to double cropping. The figures represent acres :—

Province.	Rice.	Wheat.	Barley.	Other Food Grains and Pulses.	Total Food Grains and Pulses.	Oilseeds.	Sugar.	Cotton.	Jute.	Total cropped Area.	Net cropped Area after deducting Area cropped more than once.
Bengal	20,945,400	133,600	93,900	1,575,200	22,748,100	1,794,400	283,400	66,900	2,086,300	29,034,900	24,454,200
Bihar and Orissa ..	16,106,000	1,329,800	1,313,800	8,575,300	27,324,900	1,933,400	262,500	67,200	189,000	31,748,800	25,947,900
Assam	4,658,380	2	25	131,579	4,789,986	344,820	37,023	32,508	74,081	6,360,895	5,815,393
United Provinces ..	6,431,972	6,663,187	5,092,093	21,660,948	39,848,200	806,184	1,260,914	821,059	..	45,498,918	36,248,716
Punjab	746,499	8,991,542	1,040,040	9,042,063	19,820,144	1,289,530	347,422	826,504	..	25,908,777	22,348,689
N. W. Frontier Province.	43,914	867,950	314,339	755,187	1,981,390	114,264	30,936	26,294	..	2,277,953	1,924,388
Burma	10,477,444	42,141	..	1,067,160	11,586,745	1,469,055	38,604	189,313	..	14,788,912	14,215,964
Central Provinces and Berar.	5,052,222	3,504,170	18,844	11,921,199	20,496,435	2,474,949	21,325	3,964,734	..	27,782,316	25,420,202
Madras	11,229,635	20,403	3,419	19,719,969	30,973,426	2,731,277	190,998	2,060,376	..	39,204,011	34,448,793
Bombay and Sind ..	2,904,661	2,273,030	67,218	18,351,248	23,596,157	1,263,808	72,308	3,355,791	..	31,576,425	30,312,819
Minor Areas	83,298	45,541	69,309	371,496	569,554	13,902	5,178	24,456	..	705,079	641,103
Total ..	78,679,425	28,871,366	8,012,987	93,171,259	203,735,037	14,235,589	2,550,608	11,435,135	2,349,381	254,881,986	221,778,167

generally applied to *Kharif* crops. Seeding is either done broadcast or by drilling behind a wooden plough or drill. Thinning and spacing are not nearly so well done as they might be, and intercultivation is generally too superficial. Harvesting is done by sickle where the crops are cut whole, and there is little waste involved. On the whole the methods of the ryats if carried out thoroughly would be quite satisfactory, but it is doubtful if this could be done with the number of cattle at his disposal.

Irrigation is necessary over the greater part of the country owing to insufficient rainfall and the vagaries of the monsoon. Canal irrigation has been greatly extended over the Punjab, Sind, United Provinces and Madras through Government canals which, in addition to securing the crops over existing cultivated land have converted large desert tracts into fertile areas. The Punjab and parts of the United Provinces are naturally well suited to canal irrigation owing to the frequency of their rivers. The water is generally taken off at a point a little distance from where the rivers leave the hills and is conducted to the arid plains below. The main canal splits up into diverging branches, which again subdivide up into distributaries from which the village channels receive their supplies. Water rates are levied on the matured areas of crops, Government thus bearing a part of the loss in case of failure. Much of the land is supplied by what is termed flow irrigation, *i.e.*, the land is directly commanded by the canal water, but a great deal has to be lifted from one to three feet the canal running in such cases below the level of the land. Rates for lift irrigation are, of course, lower than those for flow.

Irrigation canals are generally classed into (1) perennial and (2) inundation canals. Perennial canals, which give supplies in all seasons generally have their headworks near the hills, thus commanding a great range of country. Farther from the hills, owing to the very gradual slope of the land and the lowness of the rivers in the cold weather, perennial irrigation is difficult and inundation canals are resorted to. These canals only give irrigation when the rivers are high As a rule, in Northern India they begin to flow when the rivers rise owing to the melting of the snow on the hills in May and dry up in September.

Irrigation from Wells.—About one-quarter of the total irrigation of the country is got from lifting water from wells ranging in depth from a few feet to over fifty feet. Their numbers have greatly increased in recent years largely through Government advances for their construction. The recurring cost of this form of irrigation has, however, greatly increased owing to the high price of draught cattle and the increasing cost of their maintenance.

Tank irrigation is common in Central and Southern India. Large quantities of rain water are stored in lakes (or tanks) and distributed during the drier seasons of the year. The system of distribution is the same as that by canal.

Manures.—Feeding of animals for slaughter being practically unknown in India, the amount of farm yard manure generally available in other countries from this source thus does not exist. This is partially if not entirely made up for by the large numbers required for tillage and the amount of cows and buffaloes kept for milk. Unfortunately fuel is very scarce and a greater part of the dung of animals has to be used for burning. The most of the trash from crops is used up for the same purpose and the net return of organic matter to the soil is thus insignificant. In some parts cakes of oil seed are used as manures for valuable crops like tea and sugarcane but in the greater part of the country the only manure applied is the balance of farm yard manure available after fuel supplies have been satisfied. Farm yard manure is particularly effective and its value is thoroughly appreciated but the people have much to learn in the way of storage of bulky manures and the conservation of urine.

Rice.—A reference to the crop statistics shows that rice is the most extensively grown crop in India, although it preponderates in the wetter parts of the country, *viz.*, in Bengal, Bihar and Burma and Madras. The crop requires for its proper maturing a moist climate with well assured rainfall. The cultivated varieties are numerous, differing greatly in quality and in suitability for various conditions of soil and climate, and the people possess an intimate acquaintance with those grown in their own localities. The better qualities are sown in seed beds and transplanted in the monsoon. Broadcasted rice is grown generally in lowlying areas and is sown before the monsoon as it must make a good start before the floods arrive. Deep water rices grow quickly and to a great height and are generally able to keep pace with the rise in water level.

For transplanted rice the soil is generally prepared after the arrival of the monsoon and is worked in a puddle before the seedlings are transplanted. The land is laid out into small areas with raised partitions to regulate the distribution of the water supply. The seedlings are planted in small bunches containing from 4 to 6 plants each and are simply dibbled into the mud at distances of 6 to 12 inches apart. Where available, irrigation water is given at frequent intervals and the fields are kept more or less under water until the crop begins to show signs of ripening.

Wheat.—Wheat is grown widely throughout Northern India as a winter crop, the United Provinces and the Punjab supplying about two-thirds of the total area, and probably three quarters of the total outturn in India. The majority of the varieties grown belong to the Species Triticium Vulgare. Indian wheats are generally white, red and amber coloured and are mostly classed as soft from a commercial point of view. The grains are generally plump and well filled but the samples are spoiled through mixtures of various qualities. Indian wheat is generally adulterated to some extent with barley and largely with dirt from the threshing floor and although there is a good demand in England and the Continent for the surplus produce, prices compare unfavourably with those obtained for Canadian and Australian produce. The crop is generally grown after a summer fallow and, except in irrigated tracts, depends largely on the conservation of the soil moisture from the previous monsoon.

	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.	1915-16.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Net Area by professional survey	624,358,714	618,581,099	618,605,938	618,927,145	619,594,406	619,392,157	619,520,804
Area under forest	81,189,511	80,613,076	80,851,368	82,400,281	82,622,475	82,934,743	85,079,169
Not available for cultivation	157,627,145	149,094,347	149,605,179	146,386,582	147,169,102	145,427,217	143,930,260
Cultivable waste other than fallow	114,665,202	115,096,758	114,813,449	115,024,887	115,586,851	115,079,507	113,819,949
Fallow land	45,335,412	46,948,606	54,869,245	48,760,388	52,620,492	45,897,431	51,731,002
Net area sown with crops	222,911,547	223,064,601	215,981,683	224,165,602	219,191,773	227,611,132	221,778,167
Area irrigated	41,581,436	40,895,474	40,679,142	45,539,074	46,836,019	47,193,925	46,897,715
Area under Food-grains—							
Rice	78,730,642	78,524,391	76,636,887	78,752,493	76,907,895	77,668,882	78,679,425
Wheat	22,769,918	24,397,699	25,025,236	23,861,185	22,685,024	25,451,330	23,871,366
Barley	8,104,753	7,840,222	8,432,503	7,420,335	7,206,144	7,904,783	8,012,087
Jawar	21,801,934	21,184,164	18,386,332	20,967,730	21,405,397	21,223,398	23,050,921
Bajra	16,303,400	15,540,225	13,092,938	16,268,801	15,385,537	16,041,561	14,343,377
Ragi	4,545,335	4,288,927	4,296,207	4,455,537	4,370,376	4,250,788	4,338,380
Maize	6,857,925	6,311,627	5,591,349	6,316,089	6,166,939	6,187,729	6,735,325
Gram	13,153,400	13,946,210	14,128,881	12,422,848	9,296,672	14,364,490	13,553,533
Other grains and pulse	31,396,982	32,069,948	29,507,101	30,907,560	28,149,109	31,411,589	31,144,723
Total Food-grains	203,664,289	204,103,413	195,097,434	201,372,578	191,573,393	204,504,550	203,735,037
Area under other food-crops (including gardens, orchards, spices, &c.).	7,446,923	7,467,584	7,582,432	8,188,499	8,124,869	8,200,367	8,307,725
Area under—							
Sugar	2,442,033	2,540,541	2,565,770	2,712,085	2,707,373	2,458,865	2,550,608
Coffee	94,455	92 874	94,576	91,913	85,723	86,712	91,003
Tea	525,729	532,703	543,565	557,856	572,106	584,379	593,364

Rains in January and February are generally beneficial but an excess of rainfall in these months usually produces rust with a diminution of the yield. On irrigated land 2 to 4 waterings are generally given. The crop is generally harvested in March and April and the threshing and winnowing go on up till the end of May. In good years the surplus crop is bought up at once by exporters and no time is lost in putting it on the European market as other supplies are at that time of year scarce. In years of famines the local price is generally sufficiently high to restrict exports.

The Millets.—These constitute one of the most important group of crops in the country, supplying food for the poorer classes and fodder for the cattle. The varieties vary greatly in quality, height and suitability to various climatic and soil conditions. Perhaps the two best known varieties are Jowar (Sorghum vulgare) tall growing with a large open head, and Bajra with a close rat-tail head and thin stem. Generally speaking the jowars require better land than the bajras and the distribution of the two crops follows the quality of the soil. Neither for jowar nor bajra is manure applied and cultivation is not so thorough as for wheat, the main objective being to produce a fine seed bed. As the crop is generally sown in the beginning of the monsoon it requires to be thoroughly weeded. It is often grown mixed with the summer pulses and other crops in which case thin seedings are resorted to. The subsidiary crops are harvested as they ripen either before the millet is harvested or afterwards. The produce is consumed in the country.

Pulses are commonly grown throughout India and the grain forms one of the chief foods of the people. Most kinds do well but are subject to failure or shortage of yield owing to a variety of circumstances among which rain at the time of flowering appears to be one of the most important. They are therefore more suitable to grow as mixed crops especially with cereals, and are generally grown as such. Being deep rooted and practically independent of a Nitrogen supply in the soil they withstand drought and form a good alternation in a cereal rotation. The chief crops under this heading are gram, mash, mung and moth, gram forming the main winter pulse crop while the others are grown in the summer. The pulses grow best on land which has had a good deep cultivation. A fine seed bed is not necessary. For gram especially the soil should be *loose* and well aerated. Indian pulses are not largely exported although they are used to some extent in Europe as food for dairy cows.

Cotton is one of the chief exports from India and the crop is widely grown in the drier parts of the country. The lint from Indian cotton is generally speaking short and coarse in fibre and unsuited for English mills. Japan and the Continent are the chief buyers. The crop is grown during the summer months and requires a deep moist soil and light rainfall for its proper growth. Rain immediately after sowing or during the flowering period is injurious. In parts of Central and Southern India the seed is sown in lines and the crop receives careful attention but over Northern India it is sown broadcast (often mixed with other crops) and from the date of sowing till the time of picking is practically left to itself. The average yield, which does not amount to more than 400 lbs. per acre of seed cotton, could doubtless be greatly increased by better cultivation.

Sugarcane.—Although India is not naturally suited for sugarcane growing, some 3½ millions of acres are annually sown. The crop is mostly grown in the submontane tracts of Northern India. The common varieties are thin and hard, yielding a low percentage of juice of fair quality. In India white sugar is not made by the grower who simply boils down the juice and does not remove the molasses. The product called gur or gul is generally sold and consumed as such, although in some parts a certain amount of sugar-making is carried on. The profits, however, are small owing to the cheapness of imported sugar and there appears to be some danger to the crop if the present taste for gur were to die out. The question has been taken up by Government and a cane-breeding station has been recently opened near Coimbatore in Madras with the object of raising seedling canes and otherwise improving the supply of cane sets. A number of sugar factories of a modern type have been set up within recent years in Bihar and the United Provinces. The chief difficulty seems to be the obtaining of a sufficiently large supply of canes to offset the heavy capital charges of the undertakings.

Oilseeds.—The crops classified under this heading are chiefly sesamum, linseed and the cruciferous oilseeds (rape, mustard, etc.). Although oilseeds are subject to great fluctuation in price and the crops themselves are more or less precarious by nature—they cover an immense area.

Linseed requires a deep and moist soil and is thus grown chiefly in Bengal, Bihar, the United Provinces and the Central Provinces. The crop is grown for seed and not for fibre and the common varieties are of a much shorter habit of growth than those of Europe. The yield varies greatly from practically nothing up to 500 or 600 lbs. of seed per acre. The seed is mainly exported whole but a certain amount of oil pressing is done in the country.

Sesamum (or Gingelly) is grown mostly in Peninsular India as an autumn or winter crop. The seed is mostly exported.

The Cruciferous Oilseeds form an important group of crops in Northern India where they grow freely and attain a fair state of development. They are one of the most useful crops in the rotation. They occupy the land for a few months only, and owing to their dense growth leave the soil clean and in good condition after their removal. A number of varieties are grown differing from each other in habit of growth, time of ripening, and size and quality of seed. The best known are rape, toria, and sarson. The crop is generally sown in September or early October and harvested from December to February. The crop is subject to the attack of aphis (green fly) at the time of flowering and sometimes suffers considerable damage from this pest. The seed

	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.	1915-16.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Area under Oilseeds—							
Linseed	2,116,281	2,512,032	3,763,222	3,125,067	2,268,801	2,525,432	2,451,049
Sesamum (til)	4,740,092	4,211,829	4,174,341	4,164,045	4,278,855	4,478,122	4,135,086
Rape and Mustard	4,093,590	3,808,746	4,223,598	3,555,300	4,083,135	4,144,374	4,075,575
Other Oilseeds	3,675,094	3,911,623	4,333,704	4,091,368	4,027,236	4,185,657	3,573,879
Total Oilseeds	14,625,057	14,534,230	16,494,865	14,935,780	14,658,027	15,333,591	14,235,589
Area under—							
Cotton	13,172,188	14,447,690	14,568,189	14,138,497	15,844,363	15,221,787	11,435,135
Jute	2,756,820	2,828,669	3,090,827	3,323,951	3,135,585	3,308,718	2,349,381
Other fibres	824,669	769,594	688,868	805,911	915,303	976,142	737,351
Indigo	294,970	282,119	274,476	227,046	169,221	145,792	351,265
Opium	374,208	383,335	220,164	197,314	170,503	178,582	182,030
Tobacco	1,013,352	1,067,682	998,943	964,726	1,001,710	1,056,349	1,027,088
Fodder crops	4,748,899	4,881,742	4,977,924	5,770,466	5,910,087	6,362,511	7,076,258
Estimated yield* of—							
Rice (Cleaned) *cwt.*	557,136,000	557,938,000	601,480,000	569,700,000	575,800,000	544,840,000	656,480,000
Wheat *tons*	9,633,600	10,061,500	9,924,500	9,853,000	8,358,000	10,087,000	3,652,000
Coffee *lb.*	34,983,569	‡	‡	‡	‡	‡	‡
Tea † ,,	258,136,400	263,269,400	268,602,700	297,878,100	307,249,600	312,976,200	371,836,700
Cotton .400 *lb. bales*	4,718,000	3,853,000	3,288,000	4,610,000	5,066,000	5,209,000	3,738,000
Jute ,, ,,	7,206,600	7,932,000	8,234,700	9,342,800	8,893,900	10,443,900	7,340,900
Linseed *tons*	427,800	571,300	644,900	542,100	386,200	397,000	476,000
Rape and Mustard ,,	1,270,200	1,250,100	1,325,700	1,241,200	1,087,500	1,219,200	1,102,100
Sesamum (til) ,,	560,800	511,800	397,600	474,000	403,500	551,000	482,000
Groundnut ,,	459,300	503,200	605,700	669,900	748,800	947,700	1,058,000
Indigo *cwt.*	39,300	46,000	47,700	39,100	26,800	25,200	55,100
Cane-sugar *tons*	2,127,100	2,217,800	2,451,100	2,583,600	2,291,500	2,462,000	2,634,000

* The acreage of crops given in this table is for British India only, but the estimated yield includes the crops in certain of the Native States.

† The statistics of the production of tea are for calendar years.

‡ Return of production discontinued.

is very subject to injury from rain and great care has to be taken in the drying. The produce is largely exported whole, but there is a considerable amount of local oil-pressing—the cake being in demand for feeding purposes.

Jute.—Two varieties of the plant are cultivated as a crop, Capsularis and Olitorius. Jute growing is confined almost entirely to Eastern Bengal, in the Ganges-Brahmaputra Delta. The crop requires a rich moist soil. Owing to river inundation this part of India receives a considerable alluvial deposit every year and the land is thus able to sustain this exhausting crop without manure. The crop is rather delicate when young, but once established requires no attention, and grows to a great height (10 to 11 feet). Before ripening the crop is cut and rotted in water. After about three weeks submersion the fibre is removed by washing and beating. At the present high range of prices jute may be considered to be the best paying crop in India.

Tobacco is grown here and there all over the country chiefly, however, in Bengal, Bihar, Bombay, Madras and Burma. Of two varieties cultivated Nicotiana Tabacum is by far the most common. Maximum crops are obtained on deep and moist alluvium soils and a high standard of cultivation including liberal manuring is necessary. The crop is only suited to small holdings where labour is plentiful as the attention necessary for its proper cultivation is very great. The seed is germinated in seed beds and the young plants are transplanted when a few inches high, great care being taken to shield them from the sun. The crop is very carefully weeded and hoed. It is topped after attaining a height of, say, 2 ft., and all suckers are removed. The crop ripens from February onwards and is cut just before the leaves are become brittle. By varying the degree of fermentation of the leaves different qualities of tobacco are obtained. A black tobacco is required for *Hooka* smoking and this is the most common product but a certain amount of yellow leaf is grown for cigar making.

Live-stock consist mainly of cattle, buffaloes and goats, horses not being used for agricultural purposes. Sheep are of secondary importance.

For draught purposes cattle are in more general use than buffaloes especially in the drier parts of the country, but buffaloes are very largely used in the low lying rice tracts. For dairying buffaloes are perhaps more profitable than cows as they give richer milk and more of it; but they require more feeding. The poorer people depend largely on the milk of goats of which there are an enormous number throughout India. Cattle breeding is carried on mainly in the non-cultivated tracts in Central and Southern India, Southern Punjab and Rajputana, where distinct breeds with definite characters have been preserved. The best known draught breeds are Hansi, Nellore, Amritmehal, Gujrat, Malvi, and the finest milk cows are the Sahiwal (Punjab) Gir (Kathiawar) and Sind. Owing, however, to the encroachment of cultivation on the grazing areas well-bred cattle are becoming scarce, and some of the breeds are threatened with extinction. Efforts to improve the quality of the cattle in the non-breeding districts by the use of selected bulls have hitherto been frustrated by the promiscuous breeding which goes on in the villages.

Dairying.—Though little noticed, dairying forms a very large indigenous industry throughout India. The best known products are native butter (ghee) and cheese (dahi). During recent years a considerable trade in tinned butter has sprung up in Gujrat (Bombay Presidency). While pure *ghee* and milk can be procured in the villages, in the towns dairy products can scarcely be bought unadulterated.

AGRICULTURAL PROGRESS.

The Agricultural Departments in India as they now exist may be said to be a creation of the last ten years. There have for a good many years past been experimental farms, under official control, in various parts of India, but they were in the past to a large extent in the hands of amateurs, and the work of the Agricultural Departments, with which all the major provinces were provided by about 1884, was in the main confined to the simplification of revenue settlement procedure and the improvement of the land records system. In 1901 the appointment of an Inspector-General of Agriculture gave the Imperial Agricultural Department for the first time an expert head, and placed the Government of India in a position to enlarge the scope of their own operations and to co-ordinate the work being done on independent lines in various provinces. At that time the staff attached to the Government of India consisted of an Agricultural Chemist and a Crytogamic Botanist, while trained Deputy Directors of Agriculture were employed only in Madras, Bombay and the United Provinces and the Economic Botanist in Madras was the only provincial representative of the more specialised type of appointments. Within the next few years a number of new appointments were made, so that by March 1905 there were altogether 20 sanctioned agricultural posts; of these seven were Imperial, including a number of specialist appointments attached to the Agricultural Research Institute and College, the establishment of which at Pusa in Bengal was sanctioned in 1903. A great impetus was given to the development of the Agricultural Departments by the decision of the Government of India in 1905 to set apart a sum of 20 lakhs (£133,000) a year for the development of agricultural experiment, research, demonstration and instruction. Their ultimate aim, as then expressed, was the establishment of an experimental farm in each large tract of country in which the agricultural conditions are approximately homogeneous, to be supplemented by numerous small demonstration farms; the

AREA, CULTIVATED and UNCULTIVATED, in 1915-16: IN ACRES.

Administrations.	Area according to Survey.	DEDUCT.			NET AREA.	
		Feudatory and Tributary States.	Area for which no returns exist.	Total.	According to Survey.	According to Village Papers.
Bengal	53,931,504	3,451,520	....	3,451,520	50,479,984	50,479,984
Madras	97,837,280	6,790,552	....	6,790,552	91,046,728	89,534,674
Bombay { Presidency	85,647,509	37,004,800	....	37,004,800	48,642,709	48,642,709
Bombay { Sind ..	33,970,076	3,872,000	....	3,872,000	30,098,076	30,098,076
United Provinces { Agra ..	57,342,219	4,345,232	....	4,345,232	52,996,987	52,781,853
United Provinces { Oudh ..	15,306,720	....	....	....	15,306,720	15,480,063
Bihar and Orissa ..	71,532,847	18,334,720	....	18,334,720	53,198,127	53,198,127
Punjab	86,367,319	24,511,384	....	24,511,384	61,855,935	60,088,287
Burma .. { Upper ..	57,178,033	3,375,130	....	3,375,130	53,802,903	53,802,903
Burma .. { Lower ..	55,201,786	....	....	....	55,201,786	55,201,786
Central Provinces ..	72,552,216	19,960,343	....	19,960,343	52,591,873	52,597,491
Berar	11,374,577	....	....	....	11,374,577	11,374,577
Assam	39,275,494	7,969,920	....	7,969,920	31,305,574	31,305,574
North-West Frontier Province.	8,578,533	140,800	....	140,800	8,437,733	8,571,401
Ajmer-Merwara ..	1,770,921	....	....	....	1,770,921	1,770,921
Delhi	366,565	....	....	....	366,565	366,565
Coorg	1,012,260	....	....	....	1,012,260	1,012,260
Manpur Pargana* .	31,346	....	....	....	31,346	31,346
Total ..	749,277,205	129,756,401	....	129,756,401	619,520,804	616,338,547

Administrations.	CULTIVATED.		UNCULTIVATED.		Forests.
	Net Area actually Cropped.	Current Fallows.	Culturable Waste other than Fallow.	Not available for Cultivation.	
Bengal	24,454,200	5,393,604	5,140,657	11,233,069	4,258,454
Madras	34,448,793	8,443,525	11,029,617	22,599,192	13,013,547
Bombay { Presidency	27,058,324	6,176,749	1,262,041	5,623,250	8,522,345
Bombay { Sind ..	3,254,495	5,872,490	6,223,667	13,931,083	811,341
United Provinces { Agra ..	26,892,596	2,052,172	7,402,159	7,704,718	8,730,178
United Provinces { Oudh ..	9,356,120	457,813	2,836,335	2,216,244	613,551
Bihar and Orissa ..	25,947,900	4,647,417	6,838,576	9,769,330	5,944,904
Punjab	22,348,689	6,331,323	16,706,444	12,297,147	2,404,629
Burma .. { Upper ..	4,976,084	4,383,179	10,521,817	21,023,342	12,893,481
Burma .. { Lower ..	9,239,880	730,859	14,904,615	23,150,409	7,176,023
Central Provinces ..	18,390,296	2,187,285	13,295,207	4,047,992	14,676,711
Berar	7,029,906	1,110,504	142,646	952,634	2,138,627
Assam	5,815,393	2,491,647	14,436,209	5,510,500	3,051,825
North-West Frontier Province.	1,924,388	968,427	2,695,777	2,615,905	366,904
Ajmer-Merwara ..	201,313	286,104	247,885	848,837	96,782
Delhi	202,379	27,498	63,593	66,424	6,761
Coorg	140,157	170,163	10,297	334,225	357,418
Manpur Pargana* .	7,254	323	7,207	869	15,688
Total ..	221,778,167	51,731,002	113,819,949	143,930,260	85,079,169

* A British District in Central India.

creation of an agricultural college teaching up to a three years' course in each of the larger provinces: and the provision of an expert staff in connection with these colleges for purposes of research as well as education. The eventual cost, it was recognised, would largely exceed 20 lakhs a year. The Pusa Research Institute and College alone has cost nearly £150,000 including equipment. A part of the cost was met from a sum of £30,000 placed at Lord Curzon's disposal by Mr. Phipps, an American visitor to India. This example of munificence has recently been followed by Sir Sassoon J. David, who placed the sum of £53,300 at the disposal of the Government of Bombay for the establishment of vernacular agricultural schools and the improvement of agricultural methods, in commemoration of the visit of Their Imperial Majesties to India.

Record of Progress.

At the beginning of 1912 there were over 40 posts in the Indian Agricultural Service, besides that of Inspector-General, which was abolished at the end of the year 1911-12, the rapid advance of the provincial departments having rendered its continuance unnecessary. The officers serving directly under the Government of India included the Director of the Pusa Institute, who was also Principal of the Agricultural College, a cotton specialist, two mycologists, three entomologists, two agricultural chemists, and an economic botanist. Some of these were supernumerary officers undergoing training. The provincial agricultural departments vary in strength. Generally speaking, each of the larger provinces has at least a Deputy-Director of Agriculture (most provinces have two), an Agricultural Chemist, and an Economic Botanist. In several provinces the principalship of the Agricultural College is a separate appointment and among the remaining officers are a fibre expert in Eastern Bengal and Assam, and a "scientific officer for planting industries in Southern India" in Madras. The Government of Madras have also a mycologist and an entomologist of their own. The posts so far referred to have hitherto necessarily been filled almost exclusively by the appointment of trained specialists from the United Kingdom. There are also in the various provinces a considerable number of locally appointed Assistant Professors (in the Agricultural Colleges), Assistant Agriculturists and Entomologists, Agricultural Inspectors, Superintendents of Farms, etc., and subordinate officers. It is an essential part of the scheme adopted that facilities for the best agricultural training shall be made available in India, in order that the country may become self-supporting, so far as possible, in regard to the scientific development of agricultural methods on lines suited to local conditions. Provincial agricultural colleges, which are also research stations, have within the last few years been established in Madras, Bombay, Bengal, the United Provinces, the Punjab and the Central Provinces. The Central College at Pusa is intended to provide for more advanced training, and gives also short practical courses in subjects not at present taught in the provincial colleges. The Provincial Directors of Agriculture have so far been selected from the ranks of the Indian Civil Service, and they still in some provinces have other functions besides the supervision of the Agricultural Department: but in all the larger provinces except the United Provinces the appointment of Director of Agriculture has since 1905 been separated from that of Director of Land Records.

Machinery.

The rapid extension in India in recent years of the use of machinery in connection with agriculture and irrigation has created a demand for expert assistance to meet which Agricultural Engineers have since the end of the period under review been appointed in Bombay and the United Provinces to advise cultivators as to engines, pumps, threshing machinery, etc. An important advance in the direction of bringing the provincial agricultural departments more closely into touch with one another was made in 1905 by the creation of the Board of Agriculture. The Board, which includes the Imperial and provincial experts, meets annually to discuss the programme of agricultural work, and agricultural questions generally, and makes recommendations which are submitted to the Government of India for consideration.

Work of the Departments.

The work of the Agricultural Department has two main aspects. On the one hand, by experiment and research, improved methods or crops are developed, or the means of combating a pest are worked out; on the other hand, ascertained improvements must be demonstrated and introduced as far as possible into the practice of the Indian cultivator. There is an essential difference between agricultural departments in the East and in the West in that, whereas the latter have arisen to meet the spontaneous demands of the cultivators of the soil, the former are entirely the creation of a government anxious to give all the assistance it can to its agricultural subjects. The demand for improved agriculture has not in India, except in special cases, come from the cultivator, and it is necessary for the Department to put forth every effort, first to ascertain the needs of the cultivators and then to demonstrate how they can most effectively be met. It is only a few years since work on modern lines was commenced by the reorganised agricultural departments, and, in the first place, a great deal of spade-work had to be performed.

Cotton.

Cotton from the first received much of the attention of the new departments. Very striking results have already been achieved, and more particularly with Cambodia and other exotic varieties. The second line of improvement is the separation and selection of indigenous varieties. In Madras the efforts of the Agricultural Department have resulted in the spread of the local improved variety called *Karungany* in the Tinnevelly District and white-seeded Tellapathi cotton in Kurnool

AREA, UNDER IRRIGATION IN 1915-16: IN ACRES.

Administrations.	Total Area Cropped.	Area Irrigated.			
		By Canals.		By Tanks.	By Wells
		Government.	Private.		
Bengal	29,034,900	108,315	179,133	870,525	13,407
Madras	39,204,011	3,513,981	217,555	3,837,683	1,560,379
Bombay — Presidency	27,969,602	141,956	71,733	126,151	593,902
Bombay — Sind	3,606,823	2,935,438	22,437	....	39,002
United Provinces — Agra	32,830,913	2,508,470	30,125	55,081	4,267,978
United Provinces — Oudh	12,668,005	....	....	....	1,507,597
Bihar and Orissa	31,748,800	896,650	527,094	1,402,491	639,421
Punjab	25,903,777	7,444,317	482,755	10,966	3,605,404
Burma — Upper	5,521,298	487,873	204,534	155,974	14,519
Burma — Lower	9,267,614	297	23,029	3,616	2,608
Central Provinces	20,716,528	8,562	2,490	380,343	95,074
Berar	7,065,788	....	....	271	36,582
Assam	6,360,895	120	139,356	....	....
North-West Frontier Province.	2,227,953	298,341	455,334	....	94,553
Ajmer-Merwara	330,515	....	....	15,355	54,240
Delhi	225,313	31,563	....	1,110	25,616
Coorg	141,501	2,535	....	1,599	....
Manpur Pargana	7,750	....	....	....	141
Total	254,831,986	18,378,418	2,353,575	6,860,565	12,550,423

Administrations.	Area Irrigated.		Crops Irrigated.*			
	Other Sources.	Total Area Irrigated.	Wheat.	Other Cereals and Pulses.	Miscellaneous Food Crops.	Other Crops.
Bengal	1,038,556	2,209,936	25,637	1,5 5,348	705,775	333,523
Madras	84',523	9,974,131	5,357	10,042,689	1,186,826	457,318
Bombay — Presidency	46,470	980,212	210,436	521,247	209,733	164,453
Bombay — Sind	219,248	3,206,125	544,479	2,541,747	56,676	414,572
United Provinces — Agra	1,624,098	8,485,752	2,606,572	5,128,613	224,582	1,396,748
United Provinces — Oudh	1,201,626	2,709,223	1,158,683	1,269,510	67,655	260,448
Bihar and Orissa	1,032,231	4,497,887	58,245	3,362,194	691,784	148,797
Punjab	133,442	11,676,884	4,773,581	3,297,674	471,243	3,512,902
Burma — Upper	133,065	995,965	..	982,832	39,945	842
Burma — Lower	134,162	163,112	..	150,983	8,912	3,721
Central Provinces	26,895	513,364	43,896	396,485	69,722	3,261
Berar	650	37,503	7,771	697	25,781	3,254
Assam	214,676	384,152	20	372,537	9,225	2,370
North-West Frontier Province.	85,034	931,262	293,526	478,740	57,320	106,969
Ajmer-Merwara	48	69,613	5,420	38,985	25,394	13,437
Delhi	..	53,289	22,635	13,875	9,414	7,637
Coorg	..	4,134	..	4,134	..	..
Manpur Pargana	..	141	109	31	1	..
Total	6,754,734	45,897,715	9,756,367	30,131,221	3,859,988	6,830,252

* Includes the area irrigated at both harvests.

both of these varieties having been selected from among the mixtures ordinarily grown in the districts. A system of seed distribution was gradually built up, and now, after five or six years' work, there is a vast area under *Karungany*. The Department supplies pure seed to contract seed growers and buys the seed-cotton from these men, gins it, and arranges the distribution of seed through village depots. In Bombay, two have been selected as the best out of many hybrids and pure line cottons bred and tried for many years on the Surat farm. They give a distinct advantage both in quantity and quality over the ordinary local cotton, and promise to sell at rates 5 per cent. higher. In another part of the province arrangements are being made to distribute on a large scale seed of another improved form, which can be grown, it is estimated, over 1,300,000 acres. In the Southern Maratha Country, Broach cotton, introduced by the Department, is gaining favour. There is said to be scope for 250,000 acres, and the increased profit to the cultivator is estimated at £1 or more per acre. In the Central Provinces also, two indigenous varieties have been selected. In the United Provinces seed of a superior variety is being distributed. **Wheat** also has been the subject of prolonged experiments. One of the first results of the investigations carried out at Pusa, was the demonstration of the fact that varieties with milling and baking qualities similar to those of the best wheatson the English market could be grown to perfection in Bihar. By the application of modern methods of selection and hybridisation these high grain qualities were successfully combined with high yielding power, rust-resistance, and strong straw.

Another crop with which considerable success has been attained is **Ground-nut**, the cultivation of which had at the beginning of the decade fallen off, owing partly to the prevalence of a fungoid disease and partly to deficient rainfall. Exotic varieties with a better yield have been introduced in Bombay, and in Burma cultivation has advanced with extraordinary rapidity.

Another success of marked importance achieved by the efforts of the provincial agricultural departments is the introduction of **agricultural implements** and machinery suited to the conditions of different provinces. Information and assistance in regard to the choice of implements suitable for various conditions has, under present circumstances, to be interpreted and brought home to Indian cultivators by a more direct agency than business firms, and the agricultural departments have therefore to do a good deal of this work. They have succeeded already in introducing various kinds of implements in different parts of the country. Every assistance is given in the use and repair of implements recommended. Up to the present, the departments perform to a certain extent the functions of dealers in implements, but it is becoming difficult to control the work as the area covered by the introductions is gradually becoming large, and a need for the development of co-operative societies is felt. In Bombay, the Department has introduced ploughs of various patterns and is selling a larger number each year. In some provinces iron ploughs are becoming very popular. The possibilities of improved harrows, cultivators, and clod-crushers are also receiving attention.

Cotton Staples:—A small commission, under the chairmanship of Mr. J. MacKenna, I.C.S., is now taking evidence in India on the general question of improving the staple and marketing of the Indian cotton crop.

TEN YEARS' PROGRESS.

In 1915, Mr. James Mackenna, I.C.S., Director of Agriculture in Burma, published a brochure in which he reviewed the progress in Agriculture in India in the last ten years. In this, reviewing the effects of the work of the new Agricultural Departments, he said:—

The Agricultural Departments are now regarded as an integral and important part of the administration. The few European and Indian workers of 1905—158 in all—now number 866. Their labours are concentrated and co-ordinated: they now work on general schemes of development. Farms and demonstration plots, formerly scattered and disconnected, have increased from 35 to 374, and work on them is concentrated on the main problems, and not dissipated as used to be the case over a number of subsidiary and unimportant enquiries.

"As a result the Department can claim credit for a great advance in general agricultural practice. Cultural and manurial problems have in many cases been solved. Local machines have been improved and adapted, or better implements introduced. Real and substantial work has been done on the improvement of such important crops as wheat, cotton, rice, sugar-cane and tobacco. The general principles of crop improvement have naturally been dealt with first; but given more men and more money all the crops of India will be taken up.

"Money spent on agriculture *is a good investment*, but material results *are difficult* to gauge. Many factors have to *be considered*. A whole industry threatened by *destruction may* be saved by the discovery *and* application of preventive and protective methods. The treatment of the palm industry and areca-nut industry of Madras and the protection of the potato crop of Patna are illustrations of this kind. Again, there are the direct gains following the introduction of new or improved crops, implements, well-boring and improved methods of cultivation. We may, at a conservative estimate, claim that the increase to the value of the agricultural products of India as a result of the labours of its Agricultural Departments is already about 3½ crores of rupees annually, or over £2,300,000. This is the result of only ten years' work, and it must be remembered that every year will show a progressive increase. On the debit side we have an annual expenditure on agriculture which has risen from Rs. 8,81,124 or £58,742 in 1904-05 to Rs. 51,30,652 or £342,043 in 1913-14."

CROPS UNDER CULTIVATION IN 1915-16: IN ACRES.

Administrations.	Rice.	Wheat.	Barley.	Jawar or Cholum (Great Millet).	Bajra or Cumbu (Spiked Millet).	Ragi or Marua (Millet).
Bengal	20,945,400	133,600	93,900	2,700	6,100	11,300
Madras	11,229,635	20,403	3,419	5,524,733	3,673,416	2,529,009
Bombay — Presidency	1,718,005	1,708,677	41,544	7,671,726	4,992,633	647,249
Bombay — Sind	1,186,656	564,353	25,671	430,420	537,640	1,050
United Provinces — Agra	4,092,690	4,805,166	3,686,946	2,182,750	2,337,006	175,191
United Provinces — Oudh	2,339,282	1,858,021	1,405,147	364,160	470,916	60,350
Bihar and Orissa	16,106,000	1,329,800	1,313,800	99,800	73,400	870,000
Punjab	746,499	8,991,542	1,040,040	1,001,387	1,907,553	23,014
Burma — Upper	2,073,830	42,141	..	655,843	..	..
Burma — Lower	8,403,614	..	..	54	..	..
Central Provinces	5,023,230	3,101,567	18,755	2,410,313	53,907	14,619
Berar	23,992	402,603	89	2,545,239	131,307	486
Assam	4,658,380	2	25	..	..	1,928
North-West Frontier Province.	43,914	867,950	314,339	39,803	72,189	..
Ajmer-Merwara	110	11,710	48,152	90,819	32,881	105
Delhi	140	31,917	21,156	27,971	54,402	5
Coorg	82,993	..	..	..	..	4,074
Manpur Pargana	55	1,914	1	3,203	27	..
TOTAL	78,679,425	23,871,366	8,012,987	23,050,921	14,343,377	4,338,380

Administrations.	Maize.	Gram (pulse).	Other Food Grains and Pulses.	Total Food Grains and pulses.	Linseed.	Sesamum (Til or Jinjili)
Bengal	95,600	177,400	1,282,100	22,748,100	181,300	248,200
Madras	123,873	150,048	7,718,890	30,973,426	16,094	823,011
Bombay — Presidency	173,418	594,039	2,929,943	20,477,234	162,613	295,159
Bombay — Sind	1,874	144,329	226,927	3,118,923	6	14,488
United Provinces — Agra	1,722,344	4,227,703	4,835,882	28,065,683	238,849	238,750
United Provinces — Oudh	899,477	1,901,829	2,483,335	11,782,517	54,534	10,153
Bihar and Orissa	1,678,500	1,401,900	4,451,700	27,324,900	702,800	199,500
Punjab	1,183,622	3,665,408	1,261,079	19,820,144	32,499	127,042
Burma — Upper	154,355	61,522	166,811	3,154,502	77	1,135,883
Burma — Lower	24,498	2,343	1,734	8,432,243	193	67,611
Central Provinces	154,091	937,510	4,915,312	16,629,304	1,001,336	813,087
Berar	882	107,699	649,334	3,867,131	47,018	95,098
Assam	18,654	*	110,997	4,789,986	11,471	7,485
North-West Frontier Province	430,668	142,773	69,754	1,981,390	79	3,963
Ajmer-Merwara	70,364	10,839	22,430	287,410	120	5,123
Delhi	2,002	32,216	16,353	186,162	..	5
Coorg	..	276	1,531	88,874	..	358
Manpur Pargana	1,103	694	111	7,108	60	170
TOTAL	6,735,325	13,558,533	31,144,723	203,735,037	2,451,049	4,135,086

* Included under "Other Food Grains and Pulses."

CROPS UNDER CULTIVATION IN 1915-16: IN ACRES.

Administrations.	Rape and Mustard.	Groundnut.	Other Oil Seeds.	Total Oil Seeds.	Condiments and Spices.	Sugar Cane.	Sugar Others.
Bengal	1,322,000	...	42,900	1,794,400	162,600	233,500	49,900
Madras	19,118	1,136,142	736,912	2,731,277	749,089	94,623	96,375
Bombay—Presidency	9,883	212,657	373,634	1,053,896	200,957	65,478	823
Bombay—Sind	192,111	21	3,286	209,012	7,934	3,749	2,253
United Provinces—Agra	111,522	3,858	18,570	661,549	36,077	1,033,781	..
United Provinces—Oudh	72,125	4,879	944	114,635	16,955	227,133	..
Bihar and Orissa	725,100	2,000	304,000	1,933,400	77,900	262,200	300
Punjab	1,129,220	...	769	1,289,530	34,554	347,422	..
Burma—Upper	223	257,584	20	1,393,787	60,503	3,178	21,887
Burma—Lower	3,283	4,180	1	75,268	20,807	12,613	926
Central Provinces	47,168	6,500	393,262	2,261,353	60,745	19,592	..
Berar	951	4,472	66,057	213,596	28,930	1,733	..
Assam	325,724	..	140	344,820	2,634	37,023	..
North-West Frontier Province.	110,182	..	40	114,264	3,852	30,936	..
Ajmer-Merwara	2,098	..	698	8,039	3,908	97	17
Delhi	4,911	..	65	4,981	875	5,020	..
Coorg	6	..	13	377	3,514	33	..
Manpur Pargana	..	..	275	505	..	11	..
Total	4,075,575	1,632,293	1,941,586	14,235,589	1,521,834	2,378,122	172,486

Administrations.	Cotton.	Jute.	Other Fibres.	Total Fibres.	Indigo.	Other Dyes.
Benga	66,900	2,086,300	40,900	2,194,100	1,600	..
Madras	2,060,376	....	269,454	2,329,830	221,974	4,932
Bombay—Presidency	3,197,297	....	151,754	3,349,051	141	466,798
Bombay—Sind	158,494	....	677	159,171	1,613	722
United Provinces—Agra	794,927	....	98,242	893,169	40,432	954
United Provinces—Oudh	26,132	....	27,249	53,381	2,816	21
Bihar and Orissa	67,200	189,000	29,900	286,100	60,800	9,200
Punjab	826,504	....	28,999	855,503	21,422	3,982
Burma—Upper	167,864	....	221	168,085	353	..
Burma—Lower	21,449	....	446	21,895	..	..
Central Provinces	1,115,054	....	65,121	1,180,175	48	67
Berar	2,849,680	....	72,914	2,922,594	21	..
Assam	32,508	74,081	260	106,849	....	..
North-West Frontier Province.	26,294	....	760	27,054	1	39
Ajmer-Merwara	23,092	....	35	23,127	26	..
Delhi	1,295	....	267	1,562	18	..
Coorg	3	....	119	122	..	..
Manpur Pargana	66	....	33	99	..	..
Total	11,435,135	2,349,381	787,351	14,571,867	351,265	486,715

CROPS UNDER CULTIVATION IN 1915-16: IN ACRES.

Administrations.	Opium.	Tea.	Coffee.	Tobacco.	Other Drugs and Narcotics.	Fodder Crops.
Bengal	..	161,300	..	319,800	4,000	109,600
Madras	..	26,225	48,441	216,416	122,392	380,401
Bombay — Presidency	..	17	57	91,513	27,822	1,615,398
Bombay — Sind	..	..	..	10,990	143	9,693
United Provinces — Agra	90,705	7,647	..	68,648	1,870	1,036,154
United Provinces — Oudh	88,830	..	..	16,102	1,460	176,254
Bihar and Orissa	..	2,200	..	118,400	..	39,500
Punjab	2,295	9,739	..	55,832	777	3,177,314
Burma — Upper	200	2,124	76	25,320	1,107	44,960
Burma — Lower	..	..	4	53,823	37,238	2,608
Central Provinces	..	..	..	17,642	105	445,647
Berar	..	..	..	14,414	..	302
Assam	..	383,952	1	8,514	..	..
North-West Frontier Province	..	..	..	8,566	40	68,344
Ajmer-Merwara	..	..	..	24	..	735
Delhi	..	..	..	1,015	..	19,348
Coorg	..	160	42,424	19	237	..
Manpur Pargana	..	..	..	..	..	..
Total	182,030	593,364	91,003	1,027,038	197,191	7,076,258

Administrations.	Fruits and Vegetables, including Root Crops.	Miscellaneous Crops.		Total Area Cropped.	*Deduct* Area Cropped more than once.	Net Area Cropped.
		Food.	Non-Food.			
Bengal	638,500	320,700	276,800	29,034,900	4,580,700	24,454,200
Madras	1,120,478	12,320	125,812	39,204,011	4,755,218	34,448,793
Bombay — Presidency	601,047	3,288	16,077	27,969,602	911,278	27,058,324
Bombay — Sind	44,242	80	37,398	3,606,823	352,328	3,254,495
United Provinces — Agra	392,172	101,579	8,295	(b)32,830,913	5,938,317	26,892,596
United Provinces — Oudh	155,630	1,697	574	12,668,005	3,311,885	9,356,120
Bihar and Orissa	835,400	558,700	239,800	31,748,800	5,800,900	25,947,900
Punjab	233,409	40,580	11,274	25,903,777	3,555,088	26,348,689
Burma — Upper	688,037	2,307	4,872	5,521,298	545,214	4,976,084
Burma — Lower	454,440	14,179	141,570	9,267,614	27,734	9,239,880
Central Provinces	99,464	1,199	887	20,716,528	2,326,232	18,390,296
Berar	14,986	1,695	396	7,065,788	35,882	7,029,906
Assam	420,767	(a)	138,349	(c)6,360,895	545,502	5,815,393
North-West Frontier Province	17,726	24,643	1,098	2,277,953	353,565	1,924,388
Ajmer-Merwara	478	4,215	2,439	330,515	39,202	291,313
Delhi	5,069	815	448	225,313	22,934	202,379
Coorg	5,741	..	..	141,601	1,344	140,157
Manpur Pargana	8	(a)	19	7,750	496	7,254
Total	5,697,594	1,088,297	1,006,098	254,881,986	33,103,819	221,778,167

(a) Included under non-food crops.
(b) Includes 342,198 acres for which details are not available.
(c) „ 128,000 „ „ „ „

The following is a summary of the various **crop forecasts** relating to the season 1917-18 issued by the Department of Statistics, India.

Crop.	Tracts comprised in the figures and percentage of total Indian crop represented by them.	Estimated Area.	Per cent. of preceding year (100= final figure of preceding year).	Estimated outturn.
		Acres.	Per cent.	
Cotton ..	All cotton-growing tracts	21,191,000	99·9	(*a*)
Sugarcane ..	U.P., Punjab, Bihar and Orissa, Bengal, Madras, Bombay and Sind,* Assam, N.W.F. Province and C. P. and Berar (99·1 per cent. of total sugarcane area of British India)	2,565,000	106·3	(*a*)
Sesamum ..	U. P., C. P. and Berar, Madras, Bombay and Sind,* Bengal, Bihar and Orissa, Punjab, Ajmer-Merwara (77 per cent of the total sesamum area of British India	2,756,000	55†	(*a*)
Indigo ..	All indigo-growing tracts	617, 100	82	70,000 Cwts
Groundnut .	Madras, Bombay* and Burma. (99 per cent of total groundnut area of British India).	1,771,000	76·4	(*a*)
Rice ..	Bengal, Bihar and Orissa, Madras, Burma, U. P., C. P and Berar, Assam, and Bombay, and Sind.* (99 per cent. of total rice area of British India).	75,299,000	94·5	(*a*)

* Including Native States.

† The percentage is 88 for sesamum, if compared with the estimate at the corresponding date of last year.

(*a*) Not yet available.

Meteorology.

The meteorology of India like that of other countries is largely a result of its geographical position. The great land area of Asia to the northward and the enormous sea expanse of the Indian Ocean to the southward are the determining factors in settling its principal meteorological features. When the Northern Hemisphere is turned away from the sun, in the northern winter, Central Asia becomes an area of intense cold. The meteorological conditions of the temperate zone are pushed southward and we have over the northern provinces of India the westerly winds and eastward moving cyclonic storms of temperate regions, while, when the Northern Hemisphere is turned towards the sun, Southern Asia becomes a super-heated region drawing towards it an immense current of air which carries with it the enormous volume of water vapour which it has picked up in the course of its long passage over the wide expanse of the Indian Ocean, so that at one season of the year parts of India are deluged with rain and at another persistent dry weather prevails.

Monsoons.—The all-important fact in the meteorology of India is the alternation of the seasons known as the summer and winter monsoons. During the winter monsoon the winds are of continental origin and hence, dry, fine weather, clear skies, low humidity and little air movement are the characteristic features of this season. The summer rains cease in the provinces of the North-West Frontier Province and the Punjab about the middle of September after which cool westerly and northerly winds set in over that area and the weather becomes fresh and pleasant. These fine weather conditions extend slowly eastward and southward so that by the middle of October, they embrace all parts of the country except the southern half of the Peninsula, and by the end of the year have extended to the whole of the Indian land and sea area, the rains withdrawing to the Equatorial Belt. Thus the characteristics of the cold weather from October to February over India are:—Westerly winds of the temperate zone over the extreme north of India; to the south of these the north-east winds of the winter monsoon or perhaps more properly the north-east Trades and a gradually extending area of fine weather which, as the season progresses, finally embraces the whole Indian land and sea area. Two exceptions to these fine weather conditions exist during this period, *viz.*, the Madras coast and the north-west of India. In the former region the north-east winds which set in over the Bay of Bengal in October coalesce with the damp winds of the retreating summer monsoon, which current curves round over the Bay of Bengal, and, blowing directly on to the Madras coast gives to that region the wettest and most disturbed weather of the whole year, for while the total rainfall for the four months June to September, *i.e.*, the summer monsoon, at the Madras Observatory amounts to 15.36 inches the total rainfall for the three months October to December amounts to 29.48 inches. The other region in which the weather is unsettled, during this period of generally settled conditions, is North-west India. This region during January, February and part of March is traversed by a succession of shallow storms from the westward. The number and character of these storms vary very largely from year to year and in some years no storms at all are recorded. In normal years, however, in Northern India periods of fine weather alternate with periods of disturbed weather (occurring during the passage of these storms) and light to moderate and even heavy rain occurs. In the case of Peshawar the total rainfall for the four months, December to March, amounts to 5.26 inches while the total fall for the four months, June to September, is 4.78 inches, showing that the rainfall of the winter is, absolutely, greater in this region than that of the summer monsoon. These two periods of subsidiary "rains" are of the greatest economic importance. The fall in Madras is, as shown above, of considerable actual amount, while that of North-west India though small in absolute amount is of the greatest consequence as on it largely depend the grain and wheat crops of Northern India.

Spring Months.—March to May and part of June form a period of rapid continuous increase of temperature and decrease of barometric pressure throughout India. During this period there occurs a steady transference northward of the area of greatest heat. In March the maximum temperatures, slightly exceeding 100, occur in the Deccan; in April the area of maximum temperature, between 100° and 105°, lies over the south of the Central Provinces and Gujarat; in May maximum temperatures, varying between 105° and 110°, prevail over the greater part of the interior of the country while in June the highest mean maximum temperatures exceeding, 110° occur in the Indus Valley near Jacobabad. Temperatures exceeding 120° have been recorded over a wide area including Sind, Rajputana; the West and South Punjab and the west of the United Provinces, but the highest temperature hitherto recorded is 126° registered at Jacobabad on June 12th, 1897. During this period of rising temperature and diminishing barometric pressure, great alterations take place in the air movements over India, including the disappearance of the north-east winds of the winter monsoon, and the air circulation over India and its adjacent seas, becomes a local circulation, characterised by strong hot winds down the river valleys of Northern India and increasing land and sea winds in the coast regions. These land and sea winds, as they become stronger and more extensive, initiate large contrasts of temperature and humidity which result in the production of violent local storms. These take the forms of dust storms in the dry plains of Northern India and of thunder and hailstorms in regions where there is inter-action between damp sea winds and dry winds from the interior. These storms are frequently accompanied with winds of excessive force, heavy hail and torrential rain and are on that account very destructive.

By the time the area of greatest heat has been established over North-west India, in the last week of May or first of June, India has become the seat of low barometric pressures relatively to the adjacent seas and the whole character of the weather changes. During

the hot weather period, discussed above, the winds and weather are mainly determined by local conditions. Between the Equator and Lat. 30° or 35° south the wind circulation is that of the south-east trades, that is to say from about Lat. 30°-35° south a wind from south-east blows over the surface of the sea up to about the equator. Here the air rises into the upper strata to flow back again at a considerable elevation to the Southern Tropic or beyond. To the north of this circulation, *i.e.*, between the Equator and Lat. 20° to 25° North, there exists a light unsteady circulation, the remains of the north-east trades, that is to say about Lat. 20° North there is a north-east wind which blows southward till it reaches the thermal equator where side by side with the south-east Trades mentioned above, the air rises into the upper strata of the atmosphere. Still further to the northward and in the immediate neighbourhood of land there are the circulations due to the land and sea breezes which are attributable to the difference in the heating effect of the sun's rays over land and sea. It is now necessary to trace the changes which occur and lead up to the establishment of the south-west monsoon period. The sun at this time is progressing slowly northward towards the northern Tropic. Hence the thermal equator is also progressing northward and with it the area of ascent of the south-east trades circulation. Thus the south-east trade winds cross the equator and advance further and further northward, as the thermal equator and area of ascent follows the sun in its northern progress. At the same time the temperature over India increases rapidly and barometric pressure diminishes, owing to the air rising and being transferred to neighbouring cooler regions—more especially the sea areas. Thus we have the southern Trades circulation extending northward and the local land and sea circulation extending southward until about the beginning of June the light unsteady interfering circulation over the Arabian Sea finally breaks up, the immense circulation of the south-east Trades, with its cool, moisture laden winds rushes forward, becomes linked on to the local circulation proceeding between the Indian land area and the adjacent seas and India is invaded by oceanic conditions—the **south-west monsoon** proper. This is the most important season of the year as upon it depends the prosperity of at least five-sixths of the people of India.

When this current is fully established a continuous air movement extends over the Indian Ocean, the Indian seas and the Indian land area from Lat. 30° S. to Lat. 30° N. the southern half being the south-east trades and the northern half the south-west monsoon. The most important fact about it is that it is a continuous horizontal air movement passing over an extensive oceanic area where steady evaporation is constantly in progress so that where the current enters the Indian seas and flows over the Indian land it is highly charged with aqueous vapours.

The Current enters the Indian seas quite at the commencement of June and in the course of the succeeding two weeks spreads over the Arabian Sea and Bay of Bengal up to their extreme northern limits. It advances over India from these two seas. The Arabian sea current blows on to the west coast and sweeping over the Western Ghats prevails more or less exclusively over the Peninsula, Central India, Rajputana and north Bombay. The Bay of Bengal current blows directly up the Bay. One portion is directed towards Burma, East Bengal and Assam while another portion curves to south at the head of the Bay and over Bengal, and then meeting with the barrier of the Himalayas curves still further and blows as a south-easterly and easterly wind right up the Gangetic plain. The south-west monsoon continues for three and a half to four months, *viz.*, from the beginning of June to the middle or end of September. During its prevalence more or less general though far from continuous rain prevails throughout India the principal features of the rainfall distribution being as follows. The greater portion of the Arabian Sea current, the total volume of which is probably three times as great as that of the Bengal current, blows directly on to the west coast districts. Here it meets an almost continuous hill range, is forced into ascent and gives heavy rain alike to the coast districts and to the hilly range, the total averaging about 100 inches most of which falls in four months. The current after parting with most of its moisture advances across the Peninsula giving occasional uncertain rain to the Deccan and passes out into the Bay where it coalesces with the local current. The northern portion of the current blowing across the Gujarat, Kathiawar and Sind coasts gives a certain amount of rain to the coast districts and frequent showers to the Aravalli Hill range but very little to Western Rajputana, and passing onward gives moderate to heavy rain in the Eastern Punjab, Eastern Rajputana and the North-west Himalayas. In this region the current meets and mixes with the monsoon current from the Bay.

The monsoon current over the southern half of the Bay of Bengal blows from south-west and is thus directed towards the Tenasserim hills and up the valley of the Irrawady to which it gives very heavy to heavy rain. That portion of this current which advances sufficiently far northward to blow over Bengal and Assam gives very heavy rain to the low-lying districts of East Bengal and immediately thereafter coming under the influence of the Assam Hills is forced upwards and gives excessive rain (perhaps the heaviest in the world) to the southern face of these hills. The remaining portion of the Bay current advances from the southward over Bengal, is then deflected westward by the barrier of the Himalayas and gives general rain over the Gangetic plain and almost daily rain over the lower ranges of the Himalayas from Sikhim to Kashmir.

To the south of this easterly wind of the Bay current and to the north of the westerly wind of the Arabian Sea current there exists a debatable area running roughly from Hissar in the Punjab through Agra, Allahabad and part of Chota Nagpur to Orissa, where neither current of the monsoon prevails. In this area the rainfall is uncertain and would probably

be light, but that the storms from the Bay of Bengal exhibit a marked tendency to advance along this track and to give it heavy falls of occasional rain.

The Total Rainfall of the monsoon period (June to September) is 100 inches over part of the west coast, the amount diminishes eastward, is below 20 inches over a large part of the centre and east of the Peninsula and is only 5 inches in South Madras; it is over 100 inches on the Tenasserim and South Burma coast and decreases to 20 inches in Upper Burma; it is over 100 in the north Assam Valley and diminishes steadily westward and is only 5 inches in the Indus Valley.

The month to month distribution for the whole of India is:—

May	2·60 inches
June	7·10 ,,
July	11·25 ,,
August	9·52 ,,
September ..	6·78 ,,
October	3·15 ,,

Cyclonic storms and cyclones are an almost invariable feature of the monsoon period. In the Arabian Sea they ordinarily form at the commencement and end of the season, *viz.*, May and November, but in the Bay they form a constantly recurring feature of the monsoon season. The following gives the total number of storms recorded during the period 1877 to 1901 and shows the monthly distribution:—

	Jan.	Feb.	Mar.	Apl.	May	June
Bay of Bengal			1	4	13	28
	July	Aug.	Sep.	Oct.	Nov.	Dec.
Bay of Bengal	41	36	45	34	22	8
	Jan.	Feb.	Mar.	Apl.	May	June
Arabian Sea			..	2	15	
	July	Aug.	Sep.	Oct.	Nov.	Dec.
Arabian Sea	2	..	1	1	5	..

The preceding paragraphs give an account of the normal procession of the seasons throughout India during the year, but it must be remembered, that every year produces **variations from the normal**, and that in some years these variations are very large. This is more particularly the case with the discontinuous element rainfall. The most important variations in this element which may occur are:—

(1) Delay in the commencement of the rains over a large part of the country, this being most frequent in North Bombay and North-west India.

(2) A prolonged break in July or August or both.

(3) Early termination of the rains, which may occur in any part of the country.

(4) The determination throughout the monsoon period of more rain than usual to one part and less than usual to another part of the country. Examples of this occur every year.

About the middle of September fine and fresh weather begins to appear in the extreme north-west of India. This area of fine weather and dry winds extends eastward and southward, the area of rainy weather at the same time contracting till by the end of October the rainy area has retreated to Madras and the south of the Peninsula and by the end of December has disappeared from the Indian region, fine clear weather prevailing throughout. This procession with the numerous variations and modifications which are inseparable from meteorological conditions repeats itself year after year.

(*For monsoon of* 1917, *see page* 324).

Average Monthly and Annual Means of Air Temperature at Selected Stations in India.

Stations.	Elevation in feet.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Mean.
Hill Stations.		°	°	°	°	°	°	°	°	°	°	°	°	°
*Shillong	4,920	49.5	51.8	60.4	65.2	66.6	68.8	70.0	69.2	68.4	63.1	56.5	50.7	61.7
Darjeeling	7,376	40.1	41.6	49.7	56.2	58.3	59.9	61.5	60.9	59.4	55.2	47.8	41.8	52.7
Simla	7,224	38.8	40.6	51.5	59.3	66.0	66.9	64.3	62.8	60.9	56.7	50.1	43.4	55.1
Murree	6,333	40.5	41.1	51.1	61.2	68.3	72.3	69.4	67.2	65.9	61.3	52.8	45.0	58.0
Srinagar	5,204	30.7	33.0	45.1	55.7	63.9	69.9	73.0	70.8	64.0	53.2	44.0	36.3	53.3
Mount Abu	3,945	58.2	61.0	69.9	78.0	79.8	74.9	69.8	67.6	69.6	71.6	65.2	59.9	68.8
*Ootacamund	7,327	54.0	55.5	58.6	61.5	61.3	58.2	56.9	57.4	57.3	57.2	55.4	54.3	57.3
*Kodaikanal	7,688	55.0	56.7	59.6	61.5	61.9	59.4	57.6	57.8	57.6	56.9	54.9	55.0	57.8
Coast Stations.														
Karachi	49	65.3	68.4	75.0	80.6	84.7	86.8	84.3	82.4	82.0	80.0	74.0	67.4	77.6
Veraval	18	69.4	70.2	74.0	79.1	81.5	82.5	80.0	79.1	79.0	79.5	77.2	72.3	77.0
Bombay	37	74.5	74.8	78.0	82.1	84.6	82.4	79.5	79.4	79.4	80.7	79.3	76.4	79.3
Ratnagiri	110	76.2	76.0	78.5	82.8	84.3	80.7	78.3	78.4	78.2	79.8	79.5	77.6	79.2
Mangalore	65	78.2	79.3	81.1	83.9	83.5	78.8	77.1	77.3	77.6	78.9	79.8	79.0	79.6
Calicut	27	77.8	79.8	81.6	83.6	83.1	78.5	76.7	77.4	78.3	79.1	79.5	78.3	7.59
Negapatam	31	75.5	77.4	80.5	84.8	87.7	87.0	85.6	84.4	83.4	80.9	78.3	76.0	81.8
Madras	22	75.3	76.6	79.5	84.1	88.7	88.4	85.7	84.5	83.9	80.8	77.9	75.7	81.8
Masulipatam	15	73.6	76.7	80.3	85.2	89.8	87.8	83.9	83.4	83.0	81.2	77.4	74.0	81.4
Gopalpur	21	70.0	74.8	78.3	81.6	84.1	83.7	81.8	82.0	82.2	79.6	74.3	69.8	78.6
Rangoon	57	74.7	77.3	81.2	85.0	82.2	79.5	78.8	78.7	79.1	80.0	78.3	75.6	79.2

* As the average mean figures for Shillong, Ootacamund and Kodaikanal are not available, means of normal maximum and minimum temperatures uncorrected for diurnal variation are given.

Average Monthly and Annual Means of Air Temperature at Selected Stations in India.

Stations.	Elevation in feet.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Mean.
STATIONS ON THE PLAINS.		°	°	°	°	°	°	°	°	°	°	°	°	°
Toungoo	183	70.0	74.7	81.9	86.7	85.3	81.3	80.1	80.1	81.3	81.4	77.4	71.6	79.3
Mandalay	250	68.8	73.8	82.1	89.2	88.5	85.4	85.2	84.7	83.5	82.5	75.9	69.5	80.8
Silchar	104	63.8	67.0	73.9	78.0	80.1	81.4	82.6	82.4	81.7	79.7	73.1	66.1	75.9
Calcutta	21	65.2	70.3	79.3	85.0	85.7	84.5	83.0	82.4	82.6	80.0	72.4	65.3	77.9
Burdwan	99	65.7	70.0	80.4	86.7	86.5	84.9	83.6	82.8	83.1	80.7	73.0	66.3	78.6
Patna	183	60.8	65.3	76.9	86.2	88.0	86.4	83.5	83.1	83.3	79.5	70.1	62.2	77.1
Benares	267	60.0	65.3	76.6	86.8	91.3	89.4	84.1	83.1	83.0	77.9	67.8	60.2	77.2
Allahabad	309	59.5	64.9	76.8	87.6	92.5	90.8	84.5	83.2	83.0	77.6	67.5	59.8	77.3
Lucknow	368	58.7	63.7	75.2	86.4	90.6	90.2	85.3	83.4	83.2	77.1	66.3	58.9	76.6
Agra	555	60.1	64.8	76.7	88.1	94.0	93.4	86.0	84.2	84.2	79.4	68.7	61.2	78.4
Meerut	738	56.0	60.1	71.1	82.7	88.4	89.4	85.0	83.2	81.7	74.7	63.5	56.7	74.4
Delhi	718	57.9	62.2	74.1	86.2	91.7	92.2	86.4	84.5	83.9	78.5	67.6	59.6	77.1
Lahore	702	53.0	57.3	69.0	80.9	88.9	93.0	89.1	87.1	84.8	75.7	63.2	54.6	74.7
Multan	420	55.6	59.8	71.6	82.9	91.4	94.9	92.7	90.4	88.0	78.6	67.1	57.7	77.5
Jacobabad	186	57.3	62.4	74.5	85.5	94.8	97.7	95.0	91.6	88.8	79.2	67.5	58.9	79.3
Hyderabad (Sind)	96	63.6	67.1	77.6	86.2	91.6	91.7	88.6	86.0	86.9	82.7	73.4	65.0	79.9
Bikaner	771	59.2	63.6	76.6	88.4	94.1	94.7	90.4	87.3	87.4	82.4	70.5	61.4	78.6
Rajkote	429	66.8	70.0	77.4	85.1	89.2	87.5	81.7	80.6	80.8	80.4	74.1	68.4	78.5
Ahmedabad	163	70.3	74.0	82.7	91.2	92.9	89.4	83.7	83.0	83.5	81.3	78.3	72.9	82.1
PLATEAU STATIONS.														
Akola	930	68.5	73.7	81.9	90.1	93.3	86.2	80.6	78.9	79.7	77.9	71.7	66.8	79.2
Jubbulpore	1,327	61.8	66.8	76.5	86.3	91.9	85.7	79.0	78.0	79.0	74.8	66.6	60.3	75.6
Nagpore	1,025	68.8	74.3	82.4	90.6	94.5	86.6	80.4	79.4	80.4	78.4	72.2	67.1	79.6
Raipur	970	67.7	73.6	81.9	90.3	93.6	86.0	79.6	79.0	80.3	78.1	71.5	66.0	79.0
Ahmednagar	2,152	67.1	71.3	77.5	82.5	83.8	79.2	76.2	74.9	74.5	75.1	70.5	67.1	75.0
Poona	1,840	69.8	73.9	80.1	88.9	88.8	78.7	74.9	73.7	74.4	76.2	72.5	68.9	75.9
Sholapur	1,590	72.7	77.7	84.2	88.4	88.9	81.8	78.9	77.7	77.3	77.7	74.6	71.3	79.3
Belgaum	2,539	69.8	73.0	77.5	79.2	78.6	72.8	70.1	69.7	70.4	72.9	70.9	69.3	72.8
Hyderabad (Deccan)	1,690	70.4	77.1	83.1	88.0	90.1	82.6	77.9	77.1	77.4	76.8	72.3	69.1	78.5
Bangalore	3,021	67.5	72.0	76.7	79.9	78.5	74.0	72.0	71.8	71.8	71.8	69.6	67.5	72.8
Bellary	1,475	73.2	79.6	85.6	89.2	89.0	83.4	80.9	80.6	80.2	79.1	75.3	72.5	80.8

Average Monthly and Annual Rainfall at Selected Stations in India.

Stations.	Elevation in feet.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Total.
HILL STATIONS.		in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Shillong	4,920	0.49	0.81	1.85	4.29	10.06	16.40	13.48	12.79	14.75	6.23	0.98	0.25	82.44
Darjeeling	7,376	0.76	1.08	2.01	4.08	7.83	24 19	31.74	25.98	18.34	5.35	0.24	0.20	121.80
Simla	7,224	3.21	3.07	2.48	2.32	3.71	7.84	18:42	17.87	6.17	1.19	0.41	1.28	67.97
Murree	6,363	3.73	4.14	3.96	3.62	2.99	3.41	12.51	13.40	5.64	1.86	1.27	1.37	57.90
Srinagar	5,204	3.36	4.24	3.10	3.30	2.72	1.77	2.78	1 95	1.18	1.14	0.41	1.08	27.03
Mount Abu	3,945	0.27	0.31	0.15	0.08	0.97	5.59	22.05	21.51	9.58	1.46	0.28	0.24	62.49
Ootacamund	7,327	0.35	0.38	1.00	3.46	5.93	6.18	5.94	4.79	4.44	8.57	4.00	1.65	46.60
Kodaikanal	7,688	1.17	1.48	3.59	5.29	6.47	4.01	3.89	5.99	6.70	12.49	8.17	5.57	64.82
COAST STATIONS.														
Karachi	49	0.64	0.30	0.15	0.13	0.03	0.43	3.16	1.77	0.66	0.04	0.16	0.19	7.66
Veraval	18	0.01	0.03	0.00	0.00	0.02	5.31	8.92	7.27	2.40	0.81	0.66	0.10	25.53
Bombay	37	0.12	0.02	0.01	0.05	0.55	20.56	24.56	14.91	10.93	1.76	0.47	0.05	73.99
Ratnagiri	110	0.60	0.02	0.05	0.15	1.27	31.32	34.25	20,19	12.53	3.62	0.65	0.06	104.71
Mangalore	65	0.13	0.07	0.11	2.06	7.26	38.47	37.39	22.88	11.09	7 90	1.97	0.50	129.83
Calicut	27	0.17	0.16	0.79	3.70	9.04	36.46	29.36	14.89	7.39	9.12	3.80	1.32	116.20
Negapatam	31	1.15	0.72	0.32	1.02	1.81	1.30	1.74	3.29	3.55	10.08	15.02	11.23	51.23
Madras	22	0.83	0.28	0.37	0.65	1.96	2.06	3.80	4.66	4.84	10.93	13.30	5.25	48.93
Masulipatam	15	0.17	0.16	0.26	0.40	1.34	4.33	5.67	6.09	6.56	8.36	4.43	0.53	38.30
Gopalpur	21	0.23	0.43	0.56	0.73	2.01	5.76	6.11	7.20	6.86	9.84	3.50	0.72	43.95
Rangoon	57	0.11	0.23	0.16	1.74	11.73	18.30	21.37	19.65	15.89	7.12	2.52	0.07	98.89

Average Monthly and Annual Rainfall at Selected Stations in India.

Stations.	Elevation in feet.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Total.
STATIONS ON THE PLAINS.		in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Toungoo	183	0.06	0.12	0.08	1.90	6.43	13.63	17.48	18.53	11.46	6.95	1.25	0.16	78.05
Mandalay	250	0.06	0.08	0 21	1.19	5.26	5.71	3.26	4.16	6.21	4.54	1.67	0.28	32.63
Silchar	104	0.64	2.32	7.93	13.56	15.72	20.39	19.98	18.69	13.95	6.40	1.31	0.54	121.43
Calcutta	21	0.29	1.02	1.14	1.54	5.60	11.04	12.31	12.69	10.40	3.87	0.62	0.31	60.83
Burdwan	99	0.38	0.89	1.24	2.20	5.56	10.17	12.32	11.49	8.59	3.93	0.64	0.13	57.54
Patna	183	0.72	0.53	0.35	0.30	1.70	7.76	11.41	10.72	7.82	2.89	0.20	0.14	44.54
Benares	267	0.74	0.51	0.33	0.15	0.56	5.45	12.54	11.19	6.54	2.24	0.17	0.17	40.59
Allahabad	309	0.82	0.48	0.38	0.14	0.29	5.09	12.24	10.88	6.32	2.40	0.25	0.23	39.52
Lucknow	368	0.90	0.45	0.32	0.11	0.91	5.34	11.39	11.32	6.61	1.33	0.08	0.44	39.20
Agra	555	0.55	0.33	0.25	0.16	0.64	2.84	9.67	7.11	4.41	0.39	0.06	0.29	26.70
Meerut	738	1.05	0.83	0.63	0.34	0.70	3.60	9.37	7.64	4.55	0.43	0.08	0.40	29.62
Delhi	718	1.02	0.61	0.67	0.35	0.71	3.18	8.38	7.44	4.42	0.39	0.10	0.43	27.70
Lahore	702	0.87	1.13	0.89	0.51	0.80	1.86	6.65	4.88	2.10	0.43	0.11	0.47	20.70
Multan	420	0.39	0.36	0.42	0.27	0.39	0.43	2.19	1.66	0.60	0.07	0.06	0.27	7.11
Jacobabad	186	0.28	0.27	0.25	0.17	0.15	0.10	1.18	1.25	0.19	0.01	0.10	0.15	4.10
Hyderabad (Sind)	96	0.24	0.22	0.10	0.07	0.11	0.41	2.61	2.77	0.54	0.00	0.10	0.05	7.22
Bikaner	771	0.38	0.24	0.18	0.14	0.84	1.65	3.29	3.14	1.08	0.09	0.06	0.18	11.27
Rajkote	429	0.05	0.10	0.01	0.01	0.31	5.21	10.89	6.41	3.75	0.67	0.33	0.06	27.80
Ahmedabad	163	0.02	0.10	0.01	0.02	0.46	3.94	11.49	8.26	4.42	0.55	0.19	0.05	29.52
PLATEAU STATIONS.														
Akola	930	0.45	0.18	0.43	0.16	0.31	5.12	8.74	6.48	6.24	2.14	0.44	0.58	31.27
Jubbulpore	1,527	0.72	0.52	0.48	0.22	0.47	8.53	18.82	15.13	8.38	1.55	0.37	0.26	55.45
Nagpore	1,025	0.58	0.42	0.57	0.46	0.68	8.44	13.49	9.79	8.11	2.14	0.51	0.43	45.62
Raipur	970	0.30	0.33	0.59	0.59	0.76	9.38	14.94	12.72	7.75	2.09	0.62	0.20	50.27
Ahmednagar	2,152	0.27	0.12	0.15	0.40	1.16	4.73	3.03	3.60	6.75	3.12	0.89	0.44	24.66
Poona	1,840	0.18	0.05	0.13	0.58	1.45	5.35	6.90	4.03	4.43	4.11	0.85	0.20	28.26
Sholapur	1,590	0.06	0.08	0.29	0.63	1.09	4.41	4.19	5.42	7.77	3.63	0.87	0.30	28.74
Belgaum	2,589	0.06	0.03	0.49	2.05	2.73	9.32	15.37	9.15	4.05	5.09	1.83	0.24	49.91
Hyderabad (Deccan)	1,690	0.05	0.12	0.67	0.73	0.78	4.44	6.22	6.76	7.10	2.98	1.53	0.17	31.55
Bangalore	3,021	0.06	0.22	0.72	1.19	4.53	3.13	4.13	6.00	7.11	0.74	2.61	0.59	36.83
Bellary	1,475	0.10	0.03	0.42	0.83	1.93	1.84	1.41	2.18	4.12	4.04	1.20	0.20	18.30

MONSOON OF 1917.

The monsoon of this year was phenomenally vigorous, the total rainfall in the plains of India as a whole being in excess of the normal by 6.4″ or 17 per cent. The largest excess previously on record is one of 5″ in 1916.

The Arabian Sea monsoon arrived on the west coast at about the normal date and extended into the central parts of the country with the usual rapidity. The Bay current on the other hand appeared in north-east India nearly two weeks before the usual time, so that in the Punjab and the north-west of the United Provinces the first burst of the rainy season occurred on June 2nd, about three weeks ahead of the average date. In the interior the currents were not so steady as usual, but except for a short interval from June 21st to the 25th there was no extensive break. In July the monsoon, although of about average strength, was very unsteady and partial breaks in the rains were of frequent occurrence. Despite the absence of cyclonic storms the rainfall was concentrated chiefly in Assam, the United Provinces, east Rajputana and Central India, to the detriment of the greater part of the Peninsula and of north-west India. An appreciable improvement in the activity of the currents occurred in August, for which month the rainfall over the whole country was 13 per cent. in excess of the normal. There was a well marked break in the interior of the Peninsula during the first two weeks, but in Northern India rainfall was almost continuous. Rainfall was abnormally heavy in north-west India, and was, as in July, unusually scanty in Berar and parts of the Bombay Deccan. Of the disturbances recorded the most noteworthy was that which caused destructive floods in the Patna and Gaya districts in the beginning of the month. An exceptionally strong monsoon prevailed during September and no long breaks occurred in any part of the country. The month was in fact the wettest on record, with an excess of 53 per cent. in the rainfall. The activity of the monsoon was, as in August, concentrated chiefly in north-west India, but there was also a distinct improvement in Berar and the Bombay Deccan. Only two disturbances of Indian origin occurred in the course of the month: the second of these travelled from near Agra into the north Punjab and terminated the regular monsoon rains in the extreme north on the 25th, about ten days after the average date.

The total rainfall of the period, June to September, exceeded the average over a large part of the country, the only sub-divisions which failed to receive their proper share being the Bay Islands, Lower Burma, Bengal, Orissa, Bihar, Berar and the Bombay Deccan. The deficiency was not however marked except in the Bay Islands and Berar, where it averaged 20 per cent. In the region of abundant rainfall the excess was most pronounced in the Punjab (15″ or 96 per cent.) Rajputana (20″ or 108 per cent.), Central India (14¼″ or 42 per cent.) and Hyderabad North (12″ or 41 per cent.). The monsoon rains of 1917 were thus especially noteworthy for their unusual abundance in north-west India and Central India, and for the absence.

The following table gives more detailed information with regard to the rainfall of the period:—

Division.	Rainfall, June to September 1917.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
Burma	76·3	77·0	— 0·7	— 1
Assam	67·4	60·3	+ 7·1	+ 12
Bengal	53·7	56·0	— 2·3	— 4
Bihar and Orissa	45·8	45·3	+ 0·5	+ 1
United Provinces	43·2	36·6	+ 6·6	+ 18
Punjab	30·8	15·7	+15·1	+ 96
North-West Frontier Province	8·7	5·1	+ 3·6	+ 71
Sind	7·2	4·8	+ 2·4	+ 50
Rajputana	33·3	13·4	+19·9	+ 108
Bombay	42·7	38·6	+ 4·1	+ 11
Central India	48·4	34·0	+14·4	+ 42
Central Provinces	45·6	40·6	+ 5·0	+ 12
Hyderabad	34·4	27·2	+ 7·2	+ 26
Mysore	19·1	15·5	+ 3·6	+ 23
Madras	30·1	26·3	+ 3·8	+ 14
Mean of India	43·5	37·1	+ 6·4	+ 17

The Textile Industry.

India has been the home of the cotton trade from the earliest times. Its cotton, known as white wool, was well known to the ancients, and its cloth was familiar to the West in the days of the overland route. The name Calico comes from the fine woven goods of Calicut, and the products of the Dacca handlooms are still remarkable as the finest muslins human skill can produce.

Indian Cotton.

The exports of Indian cotton began to assume importance with the opening of the sea route. They received an immense stimulus during the American Civil War, when the close blockade of the Confederate ports produced a cotton famine in Lancashire, and threw the English spinners back on India for their supply of raw material. When the war broke out the shipments of Indian cotton were 528,000 bales, but during the last years of the war they averaged 973,000 bales. Most of this cotton was sold at an enormously inflated price, and induced a flow of wealth into Bombay, the great centre of the trade, for which there was no outlet. The consequence was an unprecedented outburst of speculation known as the "Share Mania," and when the surrender of Lee re-opened the Southern Ports widespread ruin followed. It is estimated that the surplus wealth brought into the country by the American Civil War aggregated £92 millions. Since then the cultivation of Indian cotton, although interrupted by famine, has steadily increased. For the last season for which returns are available, 1916-17, the total area in all the territories reported on was computed at 21,212,000 acres which marked a net increase of 3,466,000 acres or 19 per cent. on the 17,746,000 acres (revised figure) of the previous year. The total estimated outturn was 4,273,000 bales of 400 lbs. as against 3,738,000 bales for previous year, representing an increase of nearly 14 per cent. To this figure may be added some 1,000 bales estimated as the production in Native States in Berar and Orissa which make no return.

Bombay, the Central Provinces and Hyderabad are the **chief producing centres.** The following table gives the rough distribution of the outturn. The figures are the estimated figures for the past season, and are not exact, but they indicate the distribution of the crop :—

	Area (acres).	Yield (bales).
Bombay (*a*)	5,687,000	1,348,000
Central Provinces & Berar	4,401,000	600,000
Madras (*a*)	2,288,000	377,000
Punjab (*a*)	1,171,000	333,000
United Provinces (*a*)	1,184,000	309,000
Sind (*a*)	232,000	74,000
Burma	223,000	45,000
Bihar and Orissa (*b*)	69,000	16,000
Bengal (*a*)	73,000	20,000
North-West Frontier Province	28,000	6,000
Assam	32,000	11,000
Ajmere-Merwara	47,000	19,000
Hyderabad	3,200,000	500,000
Central India	1,411,000	309,000
Baroda	707,000	171,000
Rajputana	334,000	119,000
Mysore	126,000	160,000

(*a*) Including Native States.
(*b*) Excluding Native States, for which the yield is roughly estimated at about 1,000 bales.

The distribution of the export trade is indicated in the appended table.

Exports of cotton.—A portion of the Indian crop of the season 1915-16 and a portion of the crop of the season 1916-17 came into statistical consideration in the exports during the year 1916-17. The exports amounted to 8¼ million cwts. valued at Rs. 34 crores against 9 million cwts. valued at Rs. 25 crores in 1915-16. This represents 34 per cent. of the total value of raw materials exported from India and 14 per cent. of the total exports. The exports showed a decrease of nearly 4 per cent. in quantity and an increase of 37 per cent. in value. The average declared value per unit rose from Rs. 28 to Rs. 40 per cwt. or by 42 per cent. on a total increase of Rs. 9¼ crores. The distribution of the trade is shown below. The United Kingdom and Japan had larger receipts during the war period as compared with those in the earlier period. The principal purchasers of cotton other than Japan are in normal years Germany, Belgium, Italy, Austria-Hungary and France.

	Exports of Raw Cotton. 1915-16. Cwts.	1916-17. Cwts.
United Kingdom	883,628	801,132
Germany	.....	....
Belgium	....	....
France	205,457	264,940
Spain	239,025	253,963
Italy	1,124,106	966,391
Austria-Hungary	....	....
China	381,435	336,341
Japan	5,917,663	5,790,848
Other Countries	152,653	91,226
Total	8,853,967	8,504,841

Bombay is the great centre of the cotton trade. The **principal varieties** are Dholleras, Broach, Oomras (from the Berars), Dharwar and Coomptas. Broach is the best cotton grown in Western India. Hinganghat cotton, from the central Provinces, has a good reputation. Bengals is the name given to the cotton of the Gangetic valley, and generally to the cottons of Northern India. The Madras cottons are known as Westerns, Coconadas, Coimbatores and Tinnevellys. The best of these is Tinnevelly. Cambodia cotton has been grown with success in Southern India.

but it shows a tendency to revert. The high prices of cotton realised of recent years have given a great impetus to cultivation. Government have also been active in improving the class of cotton produced, by seed selection, hybridization and the importation of exotic cottons. Although these measures have met with a considerable measure of success, they have not proceeded far enough to leaven the whole outturn, which still consists for the most part of a short-staple early maturing variety, suitable to soils where the rainy season is brief.

Reference has been made to the popularity of the Indian handloom cloths in the earliest days of which we have record. This trade grew so large that it excited alarm in England, and it was killed by a series of enactments, commencing in 1701, prohibiting the use or sale of Indian calicoes in England. The invention of the spinning jenny and the power loom and their development in England converted India from an exporting into an importing country, and made her dependent on the United Kingdom for the bulk of her piece-goods. The first attempt to establish a cotton mill in India was in 1838, but the foundations of the industry were really laid by the opening of the first mill in Bombay in 1856. Thereafter, with occasional set backs from famine, plague and other causes, its progress was rapid.

The following statement shows the quantity (in pounds) of yarn of all counts spun in all India for the twelve months, April to March, in each of the past three years:—

	1914-15.	1915-16.	1916-17.
BRITISH INDIA.			
Bombay	448,556,493	509,770,810	482,147,956
Madras	43,031,691	44,303,310	44,187,107
Bengal	31,708,798	32,096,459	28,568,029
United Provinces of Agra and Oudh ..	(*a*) 50,281,135	48,444,669	46,177,251
Ajmer-Merwara	(*b*) ..	3,554,452	2,576,103
Punjab	(*c*) 6,813,549	4,739,520	3,749,852
Delhi	(*d*) ..	2,802,305	2,702,886
Central Provinces and Berar	34,565,150	37,413,174	34,337,717
TOTAL ..	614,956,816	683,154,699	644,446,901
FOREIGN TERRITORY.			
Native States of Indore, Mysore, Baroda, Nandgaon, Bhavnagar, Hyderabad, Wadhwan, Kishengarh (*e*), Gwalior, (Ujjain), Kolhapur (*f*), and Pondicherry (*g*)	37,027,841	39,269,880	36,123,442
GRAND TOTAL ..	651,984,657	722,424,579	680,570,343

(*a*) Includes figures for Ajmer-Merwara.
(*b*) Include under United Provinces.
(*c*) Includes figures for Delhi.
(*d*) Included under Punjab.
(*e*) The mill in Kishengarh was burnt down in December 1914.
(*f*) The Kolhapur mill stopped work from July 1914.
(*g*) Including the production of one mill only.

The spinning of yarn is in a large degree centred in Bombay, the mills of that province producing nearly 75 per cent. of the quantity produced in British India. The United Provinces of Agra and Oudh and Madras produced about 7 per cent. each, while Bengal and the Central Provinces produced 5·5 and 4·7 per cent. respectively. Elsewhere the production is as yet very limited.

Bombay Spinners.

Here is a detailed statement of the quantity (in pounds) and the counts, or numbers, of yarn spun in Bombay island :—

	1914-15.	1915-16.	1916-17.
Nos. 1 to10	88,219,669	97,875,248	73,500,246
;; 11—20	162,657,972	197,320,321	198,699,909
;; 21—30	66,552,972	77,107,994	77,591,278
;; 31—40	4,016,805	3,831,691	4,824,359
Above 40	599,962	557,233	1,225,775
Wastes, &c.	105,902	50,314	57,928
TOTAL ..	322,153,282	376,742,801	355,899,495

Yarn at Ahmedabad.

The corresponding figures for Ahmedabad are as follows:—

	1914-15.	1915-16.	1916-17.
Nos. 1—10	2,239,295	3,146,378	1,648,677
;; 11—20	21,010,020	24,438,529	17,997,730
;; 21—30	39,011,371	44,701,403	45,764,637
;; 31—40	8,970,048	10,546,467	14,178,018
Above 40	252,205	83,339	675,588
Wastes, &c.	4,713	4,052	4,399
TOTAL ..	72,487,652	82,920,668	80,269,049

Yarn Spun throughout India.

The grand totals of the quantities in various counts of yarn spun in the whole of India, including Native States, are given in the following table:—

	1914-15.	1915-16.	1916-17.
Nos. 1—10	131,009,572	145,306,797	110,599,885
;; 11—20	343,326,016	386,187,603	369,566,160
;; 21—30	156,240,084	169,743,636	171,400,937
;; 31—40	18,701,101	18,572,994	24,080,090
Above 40	2,232,668	1,902,987	4,577,334
Wastes, &c.	475,216	650,562	345,937
TOTAL ..	651,984,657	722,424,579	680,570,343

In the early days of the textile industry the energies of the millowners were largely concentrated on the production of yarn, both for the China market, and for the handlooms of India. The increasing competition of Japan in the China market, the growth of an indigenous industry in China and the uncertainties introduced by the fluctuations in the China exchanges consequent on variations in the price of silver compelled the millowners to cultivate the Home market. The general tendency of recent years has been to spin higher counts of yarn, importing American cotton for this purpose to supplement the Indian supply, to erect more looms, and to produce more dyed and bleached goods. This practice has reached a higher development in Bombay than in other parts of India, and the Bombay Presidency produces nearly 87 per *cent. of* the cloth woven in India. The United Provinces produces 3.8 per cent., the Central Provinces 5 per cent. and Madras about 3 per cent. Grey (unbleached) goods still represent nearly 77 per cent. of the whole production, but dyeing and bleaching are making rapid progress.

Analysis of Woven Goods.

The following brief extract is taken from the statement of the quantity (in pounds and their equivalent in yards) and description of woven goods produced in all India, including Native States :—

—	1914–15.	1915–16.	1916–17.
Grey and Bleached piece-goods—			
Pounds	213,576,441	267,165,288	274,564,696
Yards	880,501,618	1,094,867,131	1,134,873,161
Coloured piece-goods—			
Pounds	61,067,187	81,603,755	98,259,978
Yards	255,206,334	346,647,419	441,598,528
Grey and coloured goods other than piece-goods—			
Pounds	1,735,087	2,540,552	3,113,286
Dozens	512,485	653,343	660,384
Hosiery—			
Pounds	285,918	356,077	409,790
Dozens	179,373	220,754	256,576
Miscellaneous—			
Pounds	341,267	588,883	959,679
Cotton goods mixed with silk or wool—			
Pounds	.....	.....	42,653
Total—			
Pounds	277,005,900	352,254,555	377,350,082
Yards	1,135,707,952	1,441,514,550	1,576,471,689
Dozens	691,858	874,097	916,960

Bombay Woven Goods.

The output of woven goods during the three years in the Bombay Presidency was as follows. (The weight in pounds represents the weight of all woven goods ; the measure in yards represents the equivalent of the weight of the grey and coloured piece-goods.)

—	1914–15.	1915–16.	1916–17.
Pounds	222,159,912	287,487,309	305,178,667
Yards	926,589,396	1,102,489,745	1,318,810,176
Dozens	500,180	675,189	731,539

The grand totals for all India are as follows :—

—	1914–15.	1915–16.	1916–17.
Pounds	277,005,900	352,254,555	377,350,082
Yards	1,135,707,952	1,441,514,550	1,576,471,689
Dozens	691,858	874,097	916,960

THE TRADE OF THE YEAR.

The prosperity of the cotton industry was one of the chief features of the year 1916-17 in which trade showed much that was satisfactory. The production of piece goods in Indian mills, and the export of these goods abroad reached record figures. Stocks were below normal, prices were exceptionally high, demand owing to a favourable monsoon was brisk, and competition was reduced almost to a negligible factor, especially in regard to the low grades of goods, which before the war were imported from Germany and Austria-Hungry. At the end of the year the position of the industry was stronger than it had been for many years.

Cotton Yarn.—The increase in the exports of cotton twist and yarn by Rs. 57½ lakhs was accounted for by the rise in prices. The value of the exports was nearly Rs. 7,50 lakhs and China was, as in previous years, the chief importer of Indian yarn. The exports to Egypt, Persia, the United Kingdom, Siam, and also to Native States in Arabia except Maskat, were much above the exports of the preceding year and the pre-war average. The exports were—

——	Average of five years 1909-10 to 1913-14.	1915-1916.	1916-17.
	£	£	£
China	169,953,000	139,964,000	135,980,000
Egypt	2,183,000	5,628,000	7,212,000
Persia	2,030,000	2,579,000	5,108,000
Straits Settlements	4,411,000	4,565,000	4,553,000
United Kingdom	683,000	2,278,000	2,357,000
Arabia other than Maskat	144,000	104,000	1,194,000
Siam	305,000	828,000	1,094,000
Other countries	13,135,000	4,286,000	2,919,000
Total all (countries) £ ..	192,844,000	160,232,000	160,417,000
Value in Rs. ..	9,13,45,000	6,92,29,000	7,49,83,000

Cotton Goods.—The exports of cotton goods were valued at Rs. 5,26 lakhs of which piece-goods were approximately Rs. 5,06 lakhs. There was an increase of Rs. 2,59 lakhs in the exports of cotton piece-goods, accounted for by an increase of Rs. 2,43 lakhs due to an increase in the volume of the exports and of Rs. 16 lakhs due to higher prices. The quantity exported was more than double that in the preceding year and nearly three times the average exports during the pre-war quinquennium. The exports were—

——	Average of five years 1909-10 to 1913-14.	1915-16.	1916-17.
	Yards.	Yards.	Yards.
Grey	47,414,000	53,994,000	146,158,000
White	422,000	403,000	1,570,000
Coloured	42,384,000	59,068,000	97,017,000
Total yards ..	90,220,000	113,465,000	244,745,000
Value in Rs. ..	2,08,95,000	2,46,69,000	5,05,97,000

It is of interest to compare the increase in the descriptions of goods produced and exported.

Production in the Indian Mills.

GREY AND BLEACHED PIECE-GOODS.	Average of five years 1909-10 to 1913-14. Millions of yards.	1915-16. Millions of yards.	1916-17. Millions of yards.
Shirtings and longcloth	288·1	419·6	426·5
Dhutis	269·5	323·6	300·9
T. cloth, domestics and sheetings	139·8	151·4	192·1
Chadars	64·1	75·2	67·8
Drills and jeans	26·4	46·3	56·5
Other sorts	66·2	78·8	91·1
Total	854·1	1,094·9	1,134·9
COLOURED PIECE-GOODS	251·4	346·6	441·6
Total piece-goods	1,105·5	1,441·5	1,576·5

Exports.

GREY AND BLEACHED PIECE-GOODS.	1913-14(*) (pre-war year.) Millions of yards.	1915-16. Millions of yards.	1916-17. Millions of yards.
Shirtings	2·2	6·0	14
Chadars and dhutis	7·6	5·9	10·4
T. cloth and domestics	21·6	25·3	36·4
Drills and jeans	·6	1·2	1·6
Other sorts	12·2	16	35·3
Total	44·2	54·4	147·7
COLOURED PIECE-GOODS	45	59	97
Total piece-goods	89·2	113·4	244·7

Indian piece-goods compete with imported goods mainly in regard to grey goods.

Aden maintained her position as the chief market for Indian cloth as in the preceding year. She was a large purchaser in the year 1916-17 as were Persia, Asiatic Turkey, East Africa, the Straits Settlements, and Ceylon. The increase in the exports of Aden, Persia, East Africa, and Asiatic Turkey are very noticeable. The table below shows the exports of Indian piece-goods to the more important destinations :—

	Average of five years 1909-10 to 1913-14.	1915-16.	1916-17.
	Yards.	Yards.	Yards.
Aden and Dependencies	10,254,000	19,423,000	58,501,000
Persia	7,314,000	13,573,000	46,405,000
Turkey, Asiatic	12,464,000	13,672,000	29,600,000
East African Protectorate (including Zanzibar and Pemba)	5,389,000	7,207,000	25,820,000
Other East African ports	16,335,000	13,809,000	19,053,000
Straits Settlements	13,956,000	17,722,000	20,349,000
Ceylon	9,599,000	9,876,000	10,639,000
Other countries	14,909,000	18,183,000	34,288,000
Total (all countries) yards	90,220,000	113,465,000	244,745,000
Value in Rs.	2,08,95,000	2,46,69,000	5,05,97,000

The share of Bombay in the export trade of 1916-17 rose to nearly 88 per cent. of the total as compared with 71 per cent. the pre-war quinquennial average, while that of Madras was over 11 per cent. as compared with 27 per cent. the pre-war average. Calcutta and Karachi each exported less than one per cent. of the total. Karachi's share was normal, while that of Calcutta below normal.

Progress of the Mill Industry.

The following statement shows the progress of the Mill Industry in the whole of India.

Year ending 30th June	Number of Mills.	Number of Spindles.	Number of Looms.	Average No. of Hands Employed Daily.	Approximate Quantity of Cotton Consumed.	
					Cwts.	Bales of 392 lbs.
1897	173	4,065,618	37,584	144,335	4,553,276	1,300,936
1898	185	4,259,720	38,013	148,964	5,184,648	1,481,328
1899	188	4,728,333	39,069	162,108	5,863,165	1,675,190
1900	193	4,945,783	40,124	161,189	5,086,732	1,453,352
1901	193	5,006,936	41,180	172,883	4,731,090	1,351,740
1902	192	5,006,965	42,584	181,031	6,177,633	1,765,038
1903	192	5,043,297	44,092	181,399	6,037,690	1,739,340
1904	191	5,118,121	45,337	184,779	6,106,681	1,744,766
1905	197	5,163,486	50,139	195,277	6,577,354	1,879,244
1906	217	5,279,595	52,668	208,616	7,082,306	2,023,516
1907	224	5,333,275	58,436	205,696	6,930,595	1,980,170
1908	241	5,756,020	67,920	221,195	6,970,250	1,991,500
1909	259	6,053,231	76,898	236,924	7,381,500	2,109,000
1910	263	6,195,671	82,725	233,624	6,772,535	1,935,010
1911	263	6,357,460	85,352	230,649	6,670,531	1,905,866
1912	268	6,463,929	88,951	243,637	7,175,357	2,050,102
1913	272	6,596,862	94,136	253,786	7,336,056	2,096,016
1914*	271	6,778,895	104,179	260,276	7,500,961	2,143,126
1915*	272	6,848,744	108,009	265,346	7,359,212	2,102,632
1916*	266	6,839,877	110,268	274,361	7,692,013	2,197,718

* Year ending 31st August.

Earnings of Labour.

In 1917 wages in the Bombay cotton industry were increased by ten per cent. to meet the higher cost of food. This was a local step and was not of general applicability. We give the average wages, it being understood that the Bombay rate is at least ten per cent. higher.

AVERAGE WAGES.

Cotton.	Rate per	1914.	1915.	1916.
		Rs. a. p.	Rs. a. p.	Rs. a. p.
Card Room	Month	12 11 5	12 13 0	12 13 7
Ring-throstle Room	,,	12 0 0	12 6 8	12 6 8
Reeling Room	,,	9 8 0	9 8 0	9 8 0
Bundling Room	,,	16 0 0	16 0 0	16 0 0
Sizing Department	,,	22 12 8	23 6 10	23 6 10
Weaving Department	,,	31 0 0	33 8 0	36 0 0

Statement of the amount in rupees of Excise duty realised from goods woven in the Cotton Mills in British India; under the Cotton Duties Act, II of 1896; also the amount of equivalent duty levied in the Native States; in each year from 1896-97 to 1916-17.

	Bombay.	Madras.	Bengal.	United Provinces of Agra and Oudh (also Ajmer-Merwara).	Punjab and Delhi.	Central Provinces and Berar (*a*)
1896-97	9,14,480	56,300	4,480	45,870	13,270	89,040
1897-98	9,60,600	66,470	1,180	44,350	14,460	79,269
1898-99	11,26,390	89,130	900	61,000	12,730	84,969
1899-1900	10,95,236	88,678	2,523	54,818	10,448	88,109
1900-01	10,28,542	41,827	5,038	50,116	5,806	84,978
1901-02	15,26,103	54,139	5,863	69,284	4,379	1,10,140
1902-03	15,84,121	67,813	6,605	74,023	3,031	1,30,620
1903-04	17,64,527	62,350	10,908	89,189	1,104	1,56,371
1904-05	20,43,832	85,379	11,929	96,710	2,607	1,61,368
1905-06	22,78,425	1,10,943	11,165	1,32,364	5,144	1,68,743
1906-07	24,36,265	1,32,693	23,709	1,35,884	7,464	1,64,680
1907-08	28,82,296	1,35,131	31,556	1,66,044	8,746	1,75,944
1908-09	29,51,859	1,42,295	53,351	1,88,345	9,509	1,98,419
1909-10	33,88,658	1,45,333	55,822	1,92,552	6,611	2,17,217
1910-11	36,78,555	1,48,136	56,359	1,82,083	7,300	2,07,818
1911-12	42,17,878	1,65,048	48,631	1,84,653	10,862	2,52,415
1912-13	48,27,698	2,06,862	81,709	2,11,847	17,971	2,71,882
1913-14	45,68,188	2,13,166	78,951	2,55,467	22,353	3,00,919
1914-15	42,31,546	1,83,880	53,046	2,07,454	10,068	2,54,937
1915-16	42,25,608	2,11,456	41,704	2,01,012	9,291	2,36,497
1916-17	3,538,341	2,87,031	70,529	2,47,991	24,183	2,93,466

	Total British India.		Native States.	Grand Total.	
	Gross duty.	Net duty.	Gross duty.	Gross duty.	Net duty.
1896-97	11,23,440	10,91,590	18,459	11,41,899	11,10,049
1897-98	11,66,329	11,38,950	47,835	12,14,164	11,86,785
1898-99	13,75,119	13,53,120	52,186	14,27,305	14,05,306
1899-1900	13,39,812	13,09,514	40,937	13,80,749	13,50,451
1900-01	12,16,307	11,62,947	48,449	12,64,756	12,11,396
1901-02	17,69,908	17,16,836	61,171	18,31,079	17,77,965
1902-03	18,66,213	18,25,469	65,541	19,31,754	18,91,010
1903-04	20,77,449	20,36,104	59,061	21,36,510	20,96,149
1904-05	23,81,825	23,33,636	67,320	24,49,145	24,06,976
1905-06	27,06,784	26,71,061	83,455	27,90,239	27,54,516
1906-07	29 00,957	28,64,202	81,976	29,82,671	29,46,152
1907-08	33,99,717	33,55,946	97,499	34,97,216	34,53,443
1908-09	35,43,778	34,98,480	1,14,498	36,58,276	36,12,977
1909-10	40,06,193	39,61,020	1,37,699	41,43,892	40,98,719
1910-11	42,26,575	1,75,878	1,75,878	44,56,129	44,01,707
1911-12	48,79,478	48,04,492	1,82,479	50,61,957	49,86,971
1912-13	56,17,969	55,76,567	2,21,178	58,39,147	57,97,745
1913-14	54,39,043	53,95,014	2,38,393	56,77,436	56,33,407
1914-15	49,40,931	49,32,185	2,33,160	51,74,091	51,65,345
1915-16	49,25,571	48,40,107	1,90,275	51,15,846	50,30,382
1916-17	44,61,541	44,12,756	2,47,801	47,08,842	46,60,057

The Jute Industry.

Considering its present dimensions, the jute industry of Bengal is of very recent origin. The first jute mill in Bengal was started at Rishra in 1855, and the first power-loom was introduced in 1859. The original outturn was 8 tons per day. In 1909 it had grown to 2,500 tons per day, it is now 3,000 tons per day, and it shows every indication of growing and expanding year by year. Another interesting thing about the jute industry of Bengal is that, although it is practically a monopoly of Scotsmen from Dundee, the industry itself owes its inception to an Englishman. The founder of the industry was George Acland, an Englishman, who began life as a midshipman in the navy, and was for some years in the East India Marine Service. He quitted this service while still a young man, and engaged in commercial pursuits in Ceylon, where he was successful. Later on he turned his attention to Bengal, and arriving in Calcutta about 1853 he got into touch with the management of the paper works, then at Serampore, where experiments were being tried with country grasses and fibre plants to improve the quality or cheapen the manufacture of paper. This seems to have suggested to Acland the manufacture of rhea, and in 1854 he proceeded to England, with a view to obtaining machinery and capital in order to manufacture goods from that material. During this trip he visited Dundee, and while there Mr. John Kerr, of Douglas Foundry, suggested to him the importing of machinery into Bengal "where the jute comes from and spin it there." This suggestion bore fruit, for shortly afterwards Acland placed orders with Kerr for a few systems of preparing and spinning machinery, and returned to India the same year accompanied by his two sons and a few Dundee mechanics who were to assist him in erecting and operating the first jute mill in Bengal. This, as has been stated, was at Rishra, the site of the present Wellington mills, near Serampore, and here, in 1855, the first machine spun jute yarns were made. As not infrequently happens the pioneer got very little out of his venture. After several ups and downs the Acland interest in the Rishra mill ceased in 1867, and the company which Acland had formed in 1854 was wound up in 1868.

Power-looms.—The pioneer's example was followed by Mr. George Henderson of that ilk and firm, and in 1859 the Borneo Jute Co. was launched under his auspices. To this company is due the credit of introducing the power-loom for jute cloth. Unhampered by the financial difficulties which had burdened the Aclands, the Borneo Jute Co. made rapid progress, doubling their works in 1864, and clearing their capital twice over. In 1872 the mills were turned into a limited liability company, the present "Barnagore Jute Manufacturing Co., Ld." Four other mills followed in succession—Gouripore, Serajgunge, and India Jute Mills.

"From 1868 to 1873," writes Mr. David Wallace in "The Romance of Jute," "the five mills excepting the Rishra mill simply coined money and brought the total of their looms up to 1,250." To illustrate the prosperity of the industry at this period we may take the dividends paid by the Barnagore Company. On the working of their first half year, a 15 per cent. interim dividend was declared, which seemed to justify the enormous capital at which the company was taken over from the Borneo Company, and shares touched 68 per cent. premium. The dividend for the first year, ending August 1873, was 25 per cent., for 1874, 20 per cent., and for 1875 10 per cent. Then came a change. The investing public had forgotten the effect of the Port Canning bubble, and the condition of the jute industry in 1872-73 seeming to offer a better return than coal or tea, both of which had just enjoyed a boom, it was only necessary to issue a prospectus of a jute mill to have all the shares snapped up in the course of an afternoon.

In 1872-73 three new companies were floated locally—the Fort Gloster, Budge Budge and Sibpore, and two Home companies, the Champdany and Samnugger, all of which commenced operations in 1874. In 1874-5 eight other mills were launched—the Howrah, Oriental (now Union), Asiatic (now Soorah), Clive, Bengal Pressing and Manufacturing Co. (now the Belliaghatta-Barnagore branch mill), Rustomjee (now the Central), Ganges (registered in England), and Hastings, owned by Messrs. Birkmyre Bros., of Greenock fame—in all thirteen new companies, coming on all of a heap and swelling the total looms from 1,250 up to 3,500. This was too much of a strain for the new industry, and for the next ten years all the mills had a severe struggle. The older ones all survived the ordeal, but four of the new concerns—the Oriental, the Asiatic, the Bengal Pressing and Manufacturing Co. and the Rustomjee—became moribund, to appear again later on under new names and management. Fort Gloster also suffered badly.

Between 1875 and 1882 only one new mill was put up. This was Kamarhatty, promoted by Messrs. Jardine, Skinner & Co., which came into being in 1877, as the result of Dr. Barry's visit to Calcutta in 1876, when he transferred the agency of the Gouripore Co. from Messrs. Jardine, Skinner & Co. to his own firm. This mill, together with additions made by some of the other mills, brought the total looms up to 5,150 in 1882. By the end of 1885 the total was further augmented by the Hooghly, Titaghur, Victoria and Kanknarrah mills, bringing the number of looms at work up to 6,700. From this period on to 1894 no new mills came into existence except the Calcutta Twist Mill, with 2,460 spindles, since merged into the Wellington branch of the Champdany Co. Between 1896 and 1900 the following new mills were started:—the Gordon Twist Mill with 1,800 spindles (now acquired by Anglo-India), Khardah, Gondolpara (French owned), Alliance, Arathoon, Anglo-India, Standard, National, Delta (which absorbed the Serajgunge), and the Kinnison. A lull of four years witnessed large extensions to the existing mills, after which came the following series of new

mills, besides further heavy extensions—Dalhousie, Alexandra, Naihati, Lawrence, Reliance, Belvedere Auckland, Kelvin and Northbrook.

Progress of the Industry.

THE record of the jute industry may well be said to be one of uninterrupted progress. The following statement shews **quinquennial averages** from the earliest year for which complete information is available with actuals for the last five years; and the figures in brackets represent the variations for each period, taking the average of the quinquennium from 1879-80 to 1883-84 as 100. It will be seen that the number of looms and spindles in operation has increased to a very much larger extent than either the number of mills at work or the amount of nominal capital employed:

	Number of mills at work.	Nominal Capital (in lakhs of Rs.)	Number (in thousands) of		
			Persons employed.	Looms.	Spindles.
1879-80 to 1883-84 ..	21 (100)	270·7 (100)	38·8 (100)	5·5 (100)	·88 (100)
1884-85 to 1888-89 ..	24 (114)	341·6 (126)	52·7 (136)	7 (127)	138·4 (157)
1889-90 to 1893-94 ..	26 (124)	402·6 (149)	64·3 (166)	8·3 (151)	172·6 (196)
1894-95 to 1898-99 ..	31 (148)	522·1 (193)	86·7 (223)	11·7 (213)	244·8 (278)
1899-1900 to 1903-04 ..	36 (171)	680 (251)	114·2 (294)	16·2 (295)	334·6 (380)
1904-05 to 1908-09 ..	46 (219)	960 (355)	165 (425)	24·8 (451)	510·5 (580)
1909-10	60 (286)	1,151 (425)	204·1 (526)	31·4 (571)	645·9 (734)
1910-11	58 (276)	1,150 (425)	216·4 (558)	33·1 (602)	682·5 (776)
1911-12	59 (281)	1,193 (441)	201·3 (519)	32·9 (598)	677·5 (770)
1912-13	61 (290)	1,196·5 (442)	204 525)	34 (618)	708·7 (805)
1913-14	64 (305)	1,309·21 (486)	216·3 (557)	36 (654)	744·3 (846)
1914-15	70 (333)	1,394·3 (515)	238·3 (614)	38·4 (698)	795·5 (904)
1915-16	70 (333)	1,336 (494)	254·1 (655)	39·9 (725)	812·4 (923)

The production of the mills has increased to a still greater extent. The following figures shew the export of jute manufactures and the declared values for the quinquennial periods. The combined value of gunny-bags and gunny-cloth exported by sea in 1913-14 is over twenty-two times as great as the average value of the exports in the period 1879-80 to 1883-84.

	Jute manufactures.		Value in lakhs of Rs.
	Gunny bags in millions of number.	Gunny cloths in millions of yards.	
1879-80 to 1883-84	54·9 (100)	4·4 (100)	124·9 (100)
1884-85 to 1888-89	77 (140)	15·4 (350)	162·9 (130)
1889-90 to 1893-94	111·5 (203)	41 (992)	289·3 (232)
1894-95 to 1898-99	171·2 (312)	182 (4,136)	518 (415)
1899-1900 to 1903-04	206·5 (376)	427·2 (9,709)	826·5 (662)
1904-05 to 1908-09	257·8 (469)	698 (15,864)	1,442·7 (1,154)
1909-10	364·4 (664)	940·1 (21,366)	1,709·6 (1,369)
1910-11	360·9 (657)	955·3 (21,711)	1,699·4 (1,361)
1911-12	289·9 (528)	871·5 (19,807)	1,600·8 (1,282)
1912-13	311·7 (568)	1,021·8 (23,223)	2,287·1 (1,831)
1913-14	368·8 (672)	1,061·2 (24,118)	2,827·3 (2,264)
1914-15	397·6 (724)	1,057·3 (24,030)	2,582 (2,067)
1915-16	794·1 (1447)	1,192·3 (27,098)	3,797·8 (3,041)

Up to the last quinquennium the **exports of raw jute** were marked by increases from year to year though the improvement was not so rapid as in the case of manufactures. A slight decrease in the exports occurred in 1909-10 as compared with the figures for the preceding quinquennial period and a further decline in 1910-11, but a marked recovery was made in 1911-12 which was accentuated in 1912-13 :—

	Jute, raw, in millions of cwt.	
1879-80 to 1883-84	7·5	(100)
1884-85 to 1888-89	8·9	(119)
1889-90 to 1893-94	10	(133)
1894-95 to 1898-99	12·3	(164)
1899-1900 to 1903-04 ..	12·7	(169)
1904-05 to 1908-09	15·09	(201)
1909-10..	14·6	(195)
1910-11..	12·7	(169)
1911-12..	16·2	(215)
1912-13..	17·5	(233)
1913-14..	15·4	(205)
1914-15..	10·1	(135)
1915-16..	12	(160)

The price of raw jute reached a very high point in 1906-07, the rate being Rs. 65 per bale; in 1907-08 it dropped to Rs. 42 per bale, and the fall was accentuated in 1908-09 and 1909-10, the price having declined to 36·4 and Rs. 31 per bale respectively. In 1910-11 the price rose again to Rs. 41-8-0, to Rs. 51-4-0 in 1911-12 and further to Rs. 76-12-0 in 1913-14. The following are the quinquennial average prices per bale (400 pounds) of ordinary jute calculated from the prices current published by the Bengal Chamber of Commerce :

	Price of jute, ordinary, per bale of 400 lbs. Rs. a. p.	
1879-80 to 1883-84	23 8 0	(100)
1884-85 to 1888-89	23 3 2	(99)
1889-90 to 1893-94	32 6 5	(138)
1894-95 to 1898-99	30 12 0	(131)
1899-1900 to 1903-04 ..	32 1 7	(137)
1904-05 to 1908-09	44 13 6	(191)
1909-10..	31 0 0	(132)
1910-11..	41 8 0	(177)
1911-12..	51 4 0	(218)
1912-13..	54 12 0	(233)
1913-14..	76 12 0	(327)
1914-15..	54 8 0	(232)
1915-16..	48 4 0	(205)

The average **prices of gunny cloth** have been as follows :—

	Price of Hessian cloth 10½ oz. 40" per 100 yds. Rs. a. p.	
1879-80 to 1883-84	10 7 11	(100)
1884-85 to 1888-89	8 0 7	(77)
1889-90 to 1893-94	10 6 6	(99)
1894-95 to 1898-99	9 11 8	(93)
1899-1900 to 1903-04 ..	10 2 10	(97)
1904-05 to 1908-09	11 14 1	(112)
1909-10..	9 3 6	(88)
1910-11..	9 5 6	(89)
1911-12..	11 14 0	(113)
1912-13..	16 6 0	(156)
1913-14..	17 0 0	(162)
1914-15..	12 4 0	(117)
1915-16..	20 10 0	(197)

The 1917 crop.—The final figures of outturn for the three provinces work out as follows :—

Province.	Bales. 1917.	Bales. 1916.	Difference.
Bengal (including Cooch Behar)	7,048,956	7,497 875	+451,081
Bihar and Orissa (including Nepal) ..	734,262	626,238	+108,024
Assam	221,146	* 255,740	—34,594
Total ..	8,904,364	8 379,853	+524,511

* Revised.

Province.	Area in acres. 1917.	Area in acres. 1916.	Difference.
Bengal (including Cooch Behar) ..	2,412,427	2,383,562	+28,865
Bihar and Orissa	223,272	224,037	—765
Assam	94,000	* 95,100	—1,000
Total ..	2,729,699	2,702,699	+27,000

* Revised.

The Jute Mills Association now one of the most important, if not the most important, of the bodies affiliated to the Bengal Chamber of Commerce, was started under the following circumstances:—In 1886 the existing mills, finding that, in spite of the constant opening up of new markets, working results were not favourable, came to an agreement, with the late S. E. J. Clarke, Secretary to the Chamber of Commerce, as trustee, to work short time. The only mills which stood out of this arrangement were the Hooghly and Serajgunge. The first agreement, for six months dating from 15th February 1886, was subsequently renewed at intervals without a break for five years up to February 15, 1891. The state of the market at the time of the renewals dictated the extent of the short time, which varied throughout the five years between 4 days a week, 9 days a fortnight and 5 days a week. Besides short time, 10 per cent. of the sacking looms were shut down for a short period in 1890. An important feature of this agreement was a mutual undertaking by the parties not to increase their spinning power during the currency of the agreement, only a few exceptions being made in the case of a few incomplete new mills.

The officials of the Association are:—

Chairman: Mr. A. R. Murray.

Members of Committee: The Hon. Sir Archy Birkmyre, Mr. D. K. Hall, Mr. H. M. Peat, and Mr. G. F. Rose.

Working days.—With the introduction of the electric light into the mills in 1896, the working day was increased to 15 hours, Saturdays included, which involved an additional amount of cleaning and repairing work on Sundays. In order to minimise this Sunday work and give them a free Sunday, an agitation was got up in 1897 by the Mill European assistants to have the engines stopped at 2 or 3 p.m. on Saturdays. The local Government took the matter up, but their action went no further than applying moral suasion, backed by a somewhat half-hearted threat. The Mill Association held meetings to consider the question and the members were practically agreed as to the utility of early closing on Saturdays, but, *more suo*, could not trust themselves to carry it out without legislation. Unfortunately the Government of India refused to sanction the passing of a Resolution by the provincial Government under the Factory Act and the matter was dropped. Only a year or two ago the Jute Mills Association in despair brought out an American business expert, Mr. J. H. Parks, to advise them on the possibility of forming a jute trust with a view to exercising some control over the production and price of jute. Mr. Parks came, and wrote a report which the Association promptly pigeon-holed because the slump was over and the demand was so prodigious that there was no need to worry about the price of jute.

An Association, styled the **European Jute Dealers Association**, has lately been formed in Calcutta to promote and to guard the common interests of its members as dealers in jute for local consumption. The members are balers and brokers of jute for sale to the jute mills in and around Calcutta. Committee:—Mr. R. L. B. Gall, *Chairman*, Members:—Messrs. G. S. Alexander, P. E. Suttie, G. Morgan, C. D. Stewart, and A. Tosh.

Effects of the War.—The official review of the Trade of India in 1916-17 says:—The value of the exports of raw jute increased in 1916-17 by nearly Rs. 65 lakhs to Rs. 1,629 lakhs. The quantity exported, however, was less than in the preceding year. The estimated yield of the crop was 12 per cent. above that of the previous year, *viz.*, 1,490,000 tons or 8,340,000 bales. Owing to the lack of tonnage and other abnormal circumstances brought about by the war, the quantity exported was 10 per cent. below that of the previous year. Of the consumers the United Kingdom and Italy took less, while the United States, France (mainly *via* Dunkirk), Russia (*via* Vladivostok) and Brazil took greater quantities. There were, of course, no exports to enemy countries which, took more than 27 per cent. in the five years ending 1913-14, the pre-war year. The increase in the value accompanied by a decrease in the volume of exports was due to the very high range of prices during the months of September, October, November and December. Towards the close of the year under review prices steadily declined, and have since gone still lower.

Jute Manufactures.—The value of the exports now approximates to Rs. 42 crores. In spite of the war with its attendant difficulties of freight and finance, the exports of gunny cloth showed an increase of Rs. 241 lakhs of which Rs. 163 lakhs were due to higher prices and Rs. 78 lakhs to an increase in the volume of exports. There were also an increase of Rs. 118 lakhs in the value of gunny bags exported. The number of bags shipped increased while the weight decreased, sand bags for war purposes being lighter than the ordinary bags for transporting grain. Exports to Australia in 1916-17 were a record. The United Kingdom with Australia took more than half of the number of bags exported while the United States took more than half of the quantity of cloth exported.

There were 74 mills at work throughout the year with 39,697 looms and 824,315 spindles. The number of persons employed was 262,552. There were no difficulties as regards the supply of labour. Four new mills came into existence. It is improbable that these, with one exception, can begin manufacturing to any extent until after the war.

Hemp and Jute Substitutes.

Experiments have been made during the last few years by the Agricultural Department of the Government of India with the **Deccan hemp** plant (*Hibiscus cannabinus*), which yields a fibre very similar to jute. As a result, a new variety of the plant, known as Type 3, has been obtained, which it is now proposed to introduce into several parts of India, and, as a beginning, the variety is to be grown on a number of estates in Bihar. A sample of the fibre prepared from this variety by the usual methods of retting was 10 ft. to 12 ft. long, of an exceptionally light colour, well cleaned, and of good strength. It was valued at £18 per ton with Bimlipatam

jute at £12 10s., and Bengal first mark jute at £17 per ton. Deccan hemp has been grown fairly extensively in Bombay, the Central Provinces, and Madras, where it is used for ropes and cordage and also for the manufacture of a coarse sackcloth. A valuable feature of the plant is its suitability for cultivation in such parts of India as are not suitable for jute.

Prior to the war, the United Kingdom's requirements of hemp were mainly supplied by the following countries in order of importance:—the Philippine Islands, New Zealand, India, Russia, Italy and Germany. The opinion appears to be held that the effect of the war will be to cause very considerable changes in the character of the fibre market. There will probably be labour difficulties, it is thought, in the preparation of the hemp crops of Russia and Hungary, and it is not unlikely that the world will look to countries such as India for the supply of fibres which may be used as substitutes for the European varieties of hemp. There can be no doubt that one of the early effects of the war was to firm up hemp prices. As far as Indian hemp is concerned, values were persistently depreciated during the first six months of 1914 owing to large stocks held; but the closure of the Russian hemp market on the outbreak of war resulted in a marked improvement in values, and there was a keen demand and a considerable rise in price.

Government Scheme of Buying.

Towards the end of August 1916, it became known that an arrangement had been made by the Home Government under which Messrs. Ralli Brothers had been entrusted with the purchase of raw jute for Dundee *mills making* war bags. That is to say all the war bags and jute textiles being manufactured for Government by the Jute mills in Dundee were to be made from jute which would be supplied by Messrs. Ralli Brothers' Calcutta office. By this arrangement practically half the entire Calcutta to Dundee jute trade was taken out of the hands of a group of old established all-British firms and handed over to Messrs. Ralli Bros. What this really meant was that Messrs. Ralli Bros., who in 1915 only shipped 134,000 bales to Dundee as against approximately 10¼ lakhs of bales by British firms (these figures are based on the generally accepted estimate that Dundee takes 12 lakhs of bales a year) would in 1916 be given Dundee business to the extent of at least 5,00,000 bales.

The scheme was severely criticised in Calcutta and in the Press both in India and England, and the Anchor-Brocklebank Line refused to carry jute for Government unless the Government Buying Agency was in the hands of a purely British firm. But it was not until the end of October, after strong representations by the Government of India and the Secretary of State, that the contract was cancelled.

The new jute Scheme—It was then made known that the War Contracts Department, which had made the contract in the first place without consulting the Government of India, had accepted under certain conditions a scheme submitted by the Government of India on behalf of certain responsible British firms. This scheme provides for supplying the full amount of jute required for military purposes on similar terms to those previously arranged with Ralli Brothers. A Jute Commissioner was to be appointed in India to supervise the purchases of the various firms, and, by inspection of their accounts and supervision of their non-Government purchases, to secure that they are not unduly favouring private business. They are to charge for their own balings only actual net cost, *plus* establishment charges directly concerned with work of the press house. They are further to undertake to buy marks other than their own baling at prices not higher than jute of their own baling. The War Office will cable direct to the Jute Commissioner from time to time the quantity and grades to be purchased through the agent firms, to whom allotments will be made by the Commissioner so far as possible on the basis of their previous Dundee business.

Hydro-Electric Development.

India promises to be one of the leading countries of the world in regard to the development of hydro-electric power and great strides in this direction have already been made. India not only specially lends itself to projects of the kind, but peremptorily demands them. Cheap motive power is one of the secrets of successful industrial development and the favourable initial conditions caused by the war, the enthusiasm for industrial development which has seized nearly all classes of educated Indians, and the special attention which the circumstances of the war have compelled Government to direct towards the scientific utilisation of Indian natural resources all point to a rapid growth of industrial enterprise in all parts of India within the next few years. Indeed, the process, for which sound foundations had been laid before the war, is now rapidly under way. India is severely handicapped compared with other lands as regards the generation of power by the consumption of fuel, coal or oil. These commodities are all difficult to obtain, and costly in India except in a few favoured areas. Coal supplies, for example, are chiefly centred in Bengal and Chota Nagpur and the cost of transport is heavy. Water power and its transmission by electricity offer, on the other hand, immense possibilities, both as regards the quantity available and the cheapness at which the power can be rendered, in all parts of India.

Water power schemes, pure and simple, are generally difficult in India, because the power needs to be continuous, while the rainfall is only during a small portion of the year. Perennial rivers with sufficient water throughout the year are practically non-existent in India. Water, therefore, must be stored for use during the dry season. Favourable sites for this exist in many parts in the mountainous and hilly regions where the heaviest rainfalls occur and the progress already made in utilising such opportunities by the electrical transmission of power affords high encouragement for the future. Further, hydro-electric schemes can frequently be associated with important irrigation projects, the water being first used to drive the turbines at the generating stations and then distributed over the fields. Water, as was pointed out in an interesting paper on the subject presented last autumn to the Indian Industrial Commission by Mr. R. B. Joyner, C.I.E., M. Inst. C.E., lately in the Irrigation Branch of the Bombay Public Works Department and now engaged in the Tata's Hydro-Electric Works in Western India, "can be stored in this country at a third or a quarter of the cost which there would be in other countries. This is not merely on account of the cheaper labour, which would be the chief reason in an earthen dam, but in masonry or concrete dams. It is also because we do not use cement, which, for some reason not well-known to me, is generally deemed essential elsewhere, though it cannot really be so suitable."

Bombay Hydro-Electric Works.

The greatest water-power undertakings in India—and in some respects the greatest in the world—are the Tata hydro-electric schemes recently brought to fruition, and constantly undergoing expansion, for the supply of power in the city of Bombay. Bombay is after London the most populous city in the British Empire and it is the largest manufacturing town in Asia Its cotton mills and other factories use over 100,000 horse power of mechanical energy and until a year or two ago this was almost entirely provided by steam, generated by coal coming from a distance—mostly Bengal. The Tata Hydro-Electric Power Scheme, now an accomplished fact, marked one of the big steps forward made by India in the history of its Industrial development. It was the product of the fertile brain of Mr. David Gostling, one of the well known characters of Bombay, a little over a decade ago. The exceptional position of the Western Ghats, which rise 2,000 feet from sea-level within a very short distance of the Arabian Sea, and force the monsoon as it sweeps to land, to break into torrential rain at the mountain passes was taken full advantage of, and the table lands behind the Ghats form a magnificent catchment area to conserve this heavy rainfall in. Mr. Gostling pressed the scheme on the attention of Mr. Jamsetji Tata for years, and with perseverance collected data which he laid before that pioneer of the larger industries in India. He summoned the aid of experts from England to investigate the plan. The scheme was fully considered for six long years. Meanwhile both Mr. J. N. Tata and Mr. David Gostling passed away, but the sons of the former continued the work of their father and on Mr. Gostling's death, Mr. R. B. Joyner's aid was sought to work out the Hydraulic side of the undertaking.

The scheme completed, a syndicate secured the li[illegible] from Government and an endeavour was m[illegible] to enlist the support of financiers of England who tried to impose terms which were not acceptable. Meanwhile, the attention of Sir George Clarke (now Lord Sydenham), then Governor of Bombay, and an engineer of distinction himself, was drawn to the scheme. The interest shown by him drew the attention of Indian Chiefs in the Presidency of Bombay and outside it to its possibilities, funds flowed in and a company with an initial capital of 1,75,00,000 Rupees was started.

The hydro-electric engineering works in connection with the project are situated at and about Lonavla above the Bhor Ghat. The rainfall is stored in three lakes at Lonavla, Walwhan, Shirawta whence it is conveyed in masonry canals to the forebay or receiving reservoir. The power-house is at Khopoli, at the foot of the Ghats, whither the stored water is conveyed through pipes, the fall being one of 1,725 feet. In falling from this height the water develops a pressure of 750 lbs. per square inch and with this force drives the

turbines or water wheels. The scheme was originally restricted to 30,000 Electrical horse power, but the Company, in view of the increasing demand for power from the Bombay mills, decided to extend the works by building the Shirawta Dam and i sued further Shares bringing the capital to Rs. 3,00,00,000, the capacity of the scheme being increased to more than 40,000 electrical horse power. Issued Capital 7 per cent. Preference 8,735 shares fully paid and Ordinary 18,000, out of which 10,000 are fully paid and 8,000 new shares, on which Rs. 400 have been called up. There is also a Debenture Loan of Rs. 85 lakhs. The works were formally opened by H. E. the Governor of Bombay on the 8th February 1915. At present there are altogether 36 mills with motors of the aggregate B. H. P. of 40,000 in service. In addition to the cotton and flour mills which have contracted to take supply from the Company for a period of ten years, the Company have entered into a contract with the Bombay Electric Supply and Tramways Company, Limited, for energy required by them for two of their sub-stations and the necessary plant for one of these has been ordered. There remain many prospective buyers of electrical energy and the completion of the Company's full scheme will not suffice for all such demands. Besides the Bombay cotton mills, which alone would require about 100,000 horse power, there are, for instance, tramways, with possibilities of suburban extensions. The probable future demand is roughly estimated at about 160,000 H. P.

Investigations with a view to developing the electrical supply led to the discovery of a highly promising water storage site in the valley of the Andhra River, situated near the present lakes. A scheme was prepared, to be carried out by a separate company and providing for holding up the Andhra River by a Dam, about a third of a mile long and 192 feet high, at Tokerwadi. This dam will hold up a lake nearly twelve miles long, the further end of which approached the brink of the Ghats at Khand. Here, a tunnel, a mile and a quarter long, will carry the water to the surge chamber, whence it will enter the pipes for a vertical drop of about 1,750 feet to the generating station at Bhivpuri, about 17 miles from the generating station at Khopoli. The scheme is designed to yield 100,000 horse power in its full development. A new company to operate the scheme was formed on the 31st August 1916, with an initial capital of Rs. 2,10,00,000, divided into 160,000 Ordinary shares of Rs. 1,000 each and 5,000 Preference shares of Rs. 1,000 each, this being the Andhra Valley Power Supply Company, Limited. This Company will pay annually to the Tata Hydro-Electric Power Supply Company 15 per cent. upon the profits (after making certain deductions), or a sum of Rs. 50,000, whichever shall be the larger sum, the intention being that the new company shall pay annually to the Tata Hydro-Electric Power Supply Company a minimum sum of Rs. 50,000. The areas intended to be supplied by this Company are the town and island of Bombay and the Suburban Municipalities of Bandra and Kurla. The Hydraulic Works consisting of the Dam, the Tunnel and the Pipe Lines, have already been commenced and have shown one season's satisfactory progress. It is estimated that power will be available to its customers, if war conditions do not unduly delay matters before the end of 1920. The transmission line will carry current under a pressure of 100,000 volts. During construction interest will be paid on capital at 4 per cent. from capital account.

Mysore Installation.

The first hydro-electric scheme undertaken in India or, indeed, in the East, was that on the River Cauvery, in Mysore State, which was inaugurated, with generating works at Sivasamudram, in 1902. The Cauvery rises in the British district of Coorg, and flows right across Mysore. The first object with which the installation was undertaken was the supply of power to the goldfields at Kolar. These are 92 miles distant from Sivasamudram and for a long time this was the longest electrical power transmission line in the world. Current is also sent to Bangalore, 59 miles away, where it is used for both industrial and lighting purposes.

The following table shows the growth of the scheme since its inauguration fifteen years ago, the figures having been placed at our disposal by the present Chief Electrical Engineer with the Mysore Government, Mr. S. G. Forbes :—

Year of Installation.	H. P. Capacity.	Total.
1902	6,000	6,000
1905	5,000	11,000
1908	2,000	13,000
1915	4,000	17,000
1916	4,000	21,000

The total capacity of the Sivasamudram installation, after the completion of some improvements now in hand, will be 22,650 h.p. and it is estimated that an expenditure of approximately Rs. 15 lakhs on new anikats and channels for leading water from the Cauvery would enable this to be increased to 30,000 net h.p. This would be the maximum obtainable with the water which the Cauvery affords and, therefore, with the number of consumers, large and small, rapidly increasing, the necessity of a completely new installation elsewhere, to be operated in parallel with or separately from that at Sivasamudram, has been recognised. Two projects offer themselves. The first would involve the use of the River Shimsha, a tributary of the Cauvery which has natural falls, and the second, known as the Mekadatu project, would have its power house on the Cauvery, 25 miles down-river from Sivasamudram and just within the borders of Mysore State, adjacent to the Madras Presidency. The head of water available at Sivasamudram is 400 feet, that on the Shimsha 618 feet net, which would generate 39,500 e. h. p. At Mekadatu the Cauvery runs in rapids and a dam and a channel 20,000 feet long with a 22½ feet bed would be necessary. There would be three generating units, each giving an output of 4,000 e. h. p. Future extensions yielding an additional 8,000 h. p. could be made.

Works in Kashmir.—A scheme of much importance from its size, but more interesting because of the developments that may be expected from it than for the part which its current supply already plays in the life of the countryside, is one installed a few years ago by the Kashmir Durbar, utilising the River Jhelum, near Baramulla, which lies thirty-four miles north-west of Srinagar. The head-works of the Jhelum power installation are situated six and a half miles from the power house and the main connection between the two is a great timber flume. These works and the forebay at the delivery end of the flume have a capacity for carrying water sufficient for the generation of 20,000 electrical horse power. Four pipes 600 feet long lead from the forebay to the power house, and from forebay to water-wheel there is an effective head of 395 feet. There are four vertical waterwheels, each coupled on the same shaft to a 1,000 k.w., 3-phase, 2,300 volt, 25-period generator running at 500 r.p.m., and each unit is capable of taking a 25 per cent. overload, which the generator end is guaranteed to maintain with safety for two hours. The power house is of sufficient capacity to allow of 15,000 k.w. generating plant being installed within it. Two transmission lines run side by side as far as Baramulla, 21 miles distant, at which point one terminates. The other continues to Srinagar, a further 34 miles. The installation at Baramulla was originally utilised for three floating dredgers and two floating derricks, for dredging the river and draining the swampy countryside and rendering it available for cultivation, but these operations have temporarily been curtailed, so that only one dredger is now in operation. The lighting of Baramulla has lately been taken in hand with satisfactory results and it is expected that the lighting demand will rapidly increase and that a small demand for power will soon spring up. At Srinagar, the line terminates at the State silk factory, where current is supplied not only for driving machinery and for lighting, but for heating. The greater part of Srinagar city is now electrically lighted and during the past year a motor load of over 100 k.w. has been connected with the mains, motors being hired out to consumers by the Electrical Department. This step was taken with a view to educating the people in the use of electric power and it has been entirely successful.

FACTORIES INSPECTED UNDER THE FACTORY ACT IN 1915.

PROVINCE.	Number of Factories working and liable to be inspected.	Average Number of Hands employed daily.	Number of Persons convicted for breach of Act.	Number of Accidents Reported.			
				Fatal.	Serious.	Minor.	Total.
Bengal	383	3,78,235	3	42	448	803	1,293
Bihar and Orissa ..	49	31,199	....	11	99	409	519
United Provinces ..	221	64,270	6	4	91	458	553
Punjab	187	29,720	7	6	21	167	194
North-West Frontier Province.	4	510	....	....	....	....	....
Burma	480	66,352	14	22	121	316	459
Central Provinces and Berar.	450	48,846	31	2	58	157	217
Madras	417	84,419	16	5	16	319	340
Bombay	786	2,80,566	20	21	67	1,682	1,770
Assam	15	2,821	....	....	1	1	2
Ajmer-Merwara ..	19	14,803	....	2	1	95	98
Delhi	16	2,866	....	....	....	7	7
TOTAL IN 1914 ..	3,027	1,004,106	97	115	923	4,414	5,452

Silk.

In the early days of the East India Company the Indian Silk trade prospered greatly, and various sub-tropical races of the Silkworm were introduced. But the trade gradually declined for the following reasons:—

In the seventeenth and eighteenth centuries India's chief competitor in the silk trade was the Levant Company. Successful efforts, however, were made to acclimatise in Europe one or two races of a temperate worm, procured from China and Japan. When sericulture became part of the agriculture of France and Italy, a quality of silk was produced entirely different from that of India and Turkey, and its appearance created a new demand and organized new markets.

All subsequent experience seems to have established the belief that the plains of India, or at all events of Bengal, are never likely to produce silk that could compete with this new industry. On the lower hills of Northern India, on the other hand, a fair amount of success has been attained with this (to India) new worm, as, for example, in Dehra Dun and Kashmir. In Manipur, it would appear probable that *Bombyx mori*, possibly obtained from China, has been reared for centuries. The caprice of fashion has, from time to time, powerfully modified the Indian silk trade. The special properties of the *korah* silk were formerly much appreciated but the demand for them has now declined. This circumstance, together with defective systems of rearing and of hand-reeling and weaving, accounts largely for the present depression in the mulberry silk trade of India.

Mulberry-feeding worms.—Sir George Watt states that in no other country does the necessity exist so pressingly as in India to treat the subject of silk and the silk industries under two sections, *viz.*, Bombycidae, the domesticated or mulberry-feeding silk worms; and Saturniidae, the wild or non-mulberry-feeding worms. In India the mulberry worm (Bombyx Mori) has been systematically reared for many centuries, there being six chief forms of it. In the temperate tracts of India various forms of *Morus alba*, (the mulberry of the European silk-producing countries), are grown specially as food for the silkworm. This is the case in many parts of the plains of Northern India, Baluchistan, Afghanistan, Kashmir, and along the Himalaya at altitudes up to 11,000 feet. The other species even more largely grown for the Indian silkworm is *M. Indica* of which there are many distinctive varieties or races. This is the most common mulberry of Bengal and Assam, as also of the Nilgiri hills.

India has three well-known purely indigenous silkworms: the *tasar*, the *muga* and the *eri*. The first is widely distributed on the lower hills, more especially these of the great central tableland, and feeds on several jungle trees. The second is confined to Assam and Eastern Bengal, and feeds on a laurel. The third exists in a state of semi-domestication, being reared on the castor-oil plant. From an art point of view the *muga* silk is the most interesting and attractive, and the cocoon can be reeled readily. The *eri* silk, on the other hand, is so extremely difficult to reel that it is nearly always carded and spun—an art which was practised in the Khasi Hills of Assam long before it was thought of in Europe.

Experiments and results.—Numerous experiments have been made with a view to improving sericulture in India. French and other experts are agreed that one of the causes of the decline of the silk industry in India has been the prevalence of diseases and parasites among the worms, the most prevalent disease being pebrine. M. Lafont, who has conducted experiments in cross breeding, believes that improvement in the crops will be obtained as soon as the fight against pebrine and other diseases of the worms is taken up vigorously by the producers of seed and the rearers of worms, while improvement in the quality of the cocoons will be obtained by rearing various races, pure and cross breds.

In Kashmir and Mysore satisfactory results have been obtained. In the former State sericulture has been fostered on approved European principles with Italian reeling machinery, seed being imported annually on a large scale. In 1897 in Mysore Mr. Tata, after selecting a plantation and site for rearing houses, sent to Japan for a Superintendent and trained operatives. The Mysore authorities have made a grant of Rs. 3,000 a year to the Tata farm in return for instruction given to the people of Mysore in Japanese methods of growing the mulberry and rearing the insects. The products of the Mysore State are exported to foreign countries from Madras. The work of the Salvation Army is also noteworthy in various parts of India. They have furnished experts, encouraged the planting of mulberry trees, and subsidised several silk schools. The draft prospectus has been issued of a silk farm and institute to be started at Simla under the auspices of the Salvation Army. The Lieut.-Governor of the Punjab has permitted the school to be called after his name, and the Punjab Government is making a grant of Rs. 2,000 this year towards the expenses. Sir Dorabji Tata has also made a donation of Rs. 1,000. The Bengal Silk Committee under the guidance of some French experts have conducted cross-breeding experiments with a view to establish a multivoltine hybrid of European quality. There is a Government sericultural farm at Berhampore, where, it is said, a pure white multi-voltine of silk worm is reared. The results of the Bengal Committee's labours may be summed up as follows: the only really effective method of dealing with the problem is to work up gradually to a point at which the whole of the seed cocoon necessary for the province will be supplied to rearers under Government supervision, and to establish gradually a sufficient number of large nurseries throughout the silk districts of the province.

In 1915 there was issued by the Agricultural Research Institute, Pusa, a *Bulletin* (No. 48 of 1915) entitled "First Report on the Experiments carried out at Pusa to improve the Mulberry Silk Industry." In a short Prefatory note Mr. Bainbrigge Fletcher (Imperial Entomo-

logist) explains that the object of the Bulletin is to place on record some of the more important experiments which were commenced at Pusa in the year 1910 and have since been carried on in the endeavour to fix a superior multivoltine race of the Mulberry Silkworm which would not degenerate and which would yield silk better both in quality and outturn than that supplied by the multivoltine races which are reared at present.

Central Nurseries.—The report of the Agricultural Department, Bengal, for the year ending June 30, 1913, gives an account of a scheme which has been devised with the object of reclaiming the silk industry. The aim of the scheme is gradually to establish throughout the silk districts a sufficient number of central nurseries with rearing houses and thus enable the whole of the seed cocoons required in the province to be supplied under Government supervision. It is believed that this is the only really effective method of dealing with the problem. A number of the existing smaller nurseries were closed during 1913 and others are being converted into enlarged and improved central nurseries with rearing houses complete. The ultimate success of the scheme depends largely on the willingness of the rearers to pay an adequate price for pure seed.

A pamphlet was published in 1915, by Mr. M. N. De, Sericultural Assistant at Pusa, which contains practical hints on improved methods which are recommended to be used for reeling mulberry silk in Bengal and other silk producing districts. It has been found that, by the provision of two small pulleys to the ordinary Bengal type of reeling machine, superior thread can be obtained, the cost of the extra apparatus is merely nominal (five or six annas per machine), whilst the suitability of the machine for cottage workers is maintained. By attention to such simple points as the stifling and storage of cocoons and the temperature and quality of the water used in the reeling pans, great improvements can be effected in most silk centres in Bengal and other districts.

Exports of Silk.—As a result of the war the trade has showed in some degree signs of revival from its decadent condition, both as regards its volume and value. The value of exports during 1915-16 improved by Rs. 12 lakhs to Rs. 27½ lakhs, of which raw silk accounted for Rs. 24 lakhs. In 1916-17 the total exports rose to Rs. 54¾ lakhs.

The export of silk manufactures in 1916-17 was valued at Rs. 5,43,000.

Imperial Silk Specialist.—At the end of 1915 it was decided that the first step to be taken to revive the silk industry should be the employment of a qualified expert who, after a careful study of the conditions not only in India but in other silk-producing countries, will formulate recommendations for the consideration of Government. With the approval of the Secretary of State, Mr. H. Maxwell Lefroy, formerly Imperial Entomologist and now Professor at the Imperial College of Science and Technology, South Kensington, was appointed to the temporary post of Imperial Silk Specialist.

Indigo.

Indigo dyes are obtained from the Indigofera, a genus of Leguminosae which comprises some 300 species, distributed throughout the tropical and warm temperate regions of the globe, India having about 40. Western India may be described as the headquarters of the species, so far as India is concerned, 25 being peculiar to that Presidency. On the eastern side of India, in Bihar, Bengal, Assam and Burma, there is a marked decrease in the number of species but a visible increase in the prevalence of those that are met with.

There is evidence that when Europeans first began to export the dye from India, it was procured from the Western Presidency and shipped from Surat. It was carried by the Portuguese to Lisbon and sold by them to the dyers of Holland, and it was the desire to obtain a more ample supply of dye stuff that led to the formation of the Dutch East India Company and so to the overthrow of the Portuguese supremacy in the East. Opposition to indigo in 17th century Europe was keen owing to its interference with the woad industry, but it was competition to obtain indigo from other sources than India that led to the first decline of the Indian indigo industry. In the middle of the eighteenth century, when the cultivation of indigo in the West Indies had been given up—partly on account of the high duties imposed upon it and partly because sugar and coffee were found to be more profitable—the industry was revived in India, and, as one of the many surprises of the industry, the province of Bengal was selected for this revival. It had no sooner been organised, however, than troubles next arose in Bengal itself through misunderstandings between the planters, their cultivators and the Government, which may be said to have culminated in Lord Macaulay's famous *Memorandum* of 1837. This led to another migration of the industry from Lower and Eastern Bengal to Tirhut and the United Provinces. Here the troubles of the industry did not end, for the researches of the chemical laboratories of Germany threatened the very existence of any natural vegetable dye. They first killed the maddar dye of Europe, then the safflower, the lac and the *al* dyes of India, and are now advancing rapidly with synthetic indigo, intent on the complete annihilation of the natural dye. Opinions differ on many aspects of the present vicissitude; meantime the exports from India have seriously declined, and salvation admittedly lies in the path of cheaper production both in cultivation and manufacture. These issues are being vigorously faced and some progress has been accomplished, but the future of the industry can scarcely help being described as of great uncertainty. The issue is not the advantage of new regulations of land tenure, but one exclusively of natural *versus* synthetic indigo. (See, Watt's "Commercial Products of India.") In February 1915 a conference was held at Delhi when the possibility of assisting the **natural**

Indigo industry was considered from three points of view—agricultural, research and commercial. The agricultural or botanical side of the question is fully discussed by Mr. and Mrs. Howard of Pusa in Bulletins Nos. 51 and 54 of the Agricultural Research Institute. Perhaps the most important problem for the natural indigo trade to solve is the marketing of the dye in the form most suited to the dyers. Bihar indigo, according to a British Dyer whose views are entitled to respect, dyes a fuller shade than either synthetic indigotin or indigos refined from plant-indigos. It is further stated that 60 per cent. of Bihar indigo dyes a fuller shade than 70 per cent. Dutch-Java.

Decline of the Industry.—Since synthetic indigo was put upon the market, in 1897, the natural indigo industry of India has declined very rapidly; apart from slight recoveries in 1906-07 and 1911-12, the decline continued without a break until the revival due to the impossibility of obtaining artificial dyes in sufficient quantities during the war. The figures for the last few years may be contrasted with those for the five years ending in 1897, in which the area under indigo averaged 2,400 square miles and the value of the exports over £3,000,000 a year.

	Area under Indigo.	Quantity Exported.	Value of Exports.
	Acres.	Cwts.	£
1901-02 ..	791,000	89,750	1,234,837
1902-03 ..	646,000	65,377	803,738
1903-04 ..	707,000	60,410	717,468
1904-05 ..	477,000	49,252	556,405
1905-06 ..	384,000	31,186	390,918
1906-07 ..	421,000	35,102	466,985
1907-08 ..	394,000	32,490	424,849
1908-09 ..	284,000	24,946	326,986
1909-10 ..	289,000	18,061	234,544
1910-11 ..	276,000	16,939	223,529
1911-12 ..	271,000	19,155	250,535
1912-13 ..	220,000	11,857	147,000
1913-14 ..	176,000	10,939	142,000
1914-15 ..	148,400	17,142	599,940
1915-16 ..	314,300	41,942	1,385,428
1916-17 ..	756,400	33,500	1,383,000

Present Position.—The crop is most important in Bihar and Madras; in the Punjab and United Provinces it now occupies little over 100 square miles altogether. In Bengal the crop is largely raised by British planters, in the other provinces chiefly by native cultivators. Scientific research work on questions connected with cultivation and manufacture has been carried out by the Bihar Planter's Association, with the aid of a grant from Government since 1897.

In 1916-17 the production of indigo was estimated at 95,000 cwts. as against 55,000 in the preceding year, but the exports decreased owing to a larger local demand consequent on the scarcity of synthetic dyes. The exports were 33,500 cwts, compared with 41,900 cwts. in the preceding year and 15,400 cwts. the pre-war quinquennial average. The Average declared value increased from Rs. 496 per cwt. in 1915-16 to Rs. 618 per cwt. in 1916-17.

Crop Forecast.—The Director of Statistics in his first memorandum on the crop for the season 1917-18 states that the total area sown is estimated at 617,100 acres, which is practically the same as the revised estimate at the corresponding date of last year. As compared with the final estimate of last year (756,400 acres) the present estimate shows a decrease of 18 per cent. The total yield of dye is now roughly estimated at 70,000 cwts. as against 75,000 cwts. estimated in October 1916, or a decrease of 6·5 per cent. As compared with the final estimate of last year (95,000 cwts.) the present estimate shows decrease of 26 per cent. Weather conditions at showing time were favourable, and an extended area was sown with the crop, except in the Madras Deccan, where failure of rains, combined with a fall in prices, curtailed the area to such an extent as to counterbalance the increase in all other provinces. The crop has been adversely affected by excessive rain and floods in Bihar, the Punjab, and the western districts of the United Provinces. Elsewhere the condition of the crop is reported to be good.

Details for the provinces are given below:—

First Forecast.

Province.	Area.		Yield.		Yield per acre.	
	1917-18.	1916-17.	1917-18.	1916-17.	1917-18.	1916-17.
	acres.	acres.	cwts.	cwts.	lbs.	lbs.
Madras	265,700	335,300 (a)	34,000	40,000	14	13
Bihar and Orissa	85,900	76,500 (a)	10,300	10,800	13	16
Punjab	70,100	45,200	8,600	7,000	14	17
United Provinces	179,000	150,300	15,000	16,000	9	12
Bombay and Sind	9,400	7,700	1,900	1,200	23	17
Bengal	7,000	2,200	500	200	8	10
Total ..	617,100	617,200 (a)	70,300	75,200	13	14

(a) Revised figures.

Tea cultivation in India is chiefly in Assam, Bengal and Southern India, the cultivation elsewhere being comparatively unimportant. The latest available official general statistics are those for the year 1916 (The statistics of production deal, for seasonal reasons, with the calendar year 1916 and those of trade with the official fiscal year 1916-17.) They show a total area of 650,800 acres under tea, 2·5 more than in 1915. Of this area, 601,400 acres were plucked in 1916. The total number of plantations was 4,486 against 4,437 in 1915. The area under cultivation has increased in the last 10 years by 21 per cent. and the production by 51 per cent. The average production per acre for the whole of India, excluding Burma (where the produce of the tea gardens is almost wholly converted into wet pickled tea, which is eaten as a condiment) was 614 lbs. in 1916 as compared with 637 lbs. in 1915.

Area and Production.

The total area under tea in 1916 was divided between the different Provinces as follows:—

	Acres.
Assam—	
Brahmaputra Valley	242,470
Surma Valley (Cachar and Sylhet)	146,702
Total, Assam	389,172
Bengal	165,769
Bihar and Orissa (Chota Nagpur)	2,160
United Provinces	7,978
Punjab	9,879
Madras	30,919
Travancore and Cochin	42,105
Burma	2,841
Grand Total	650,82

The total production in 1916 was 368,582,688 lbs., divided between the different parts of India as follows:—

	Lbs.
Assam	242,184,571
Bengal	92,644,990
Bihar & Orissa	399,971
United Provinces	2,352,732
Punjab	1,530,101
Madras	11,364,44
Travancor & Cochin	17,959,801
Burma	146,·76
Total	368,582,688

Exports.

The following were the exports of Indian tea by sea in 1916-17:—

	Lbs.
United Kingdom	224,927,894
Russia	27,603,884
Other European Countries	122,728
Egypt	1,081,273
Elsewhere in Africa	1,312,590
Canada	8,443,0·2
U. S. A.	3,031,648
Rest of America	1,741,618
Ceylon	3,647,157
China	9,229,260
Asiatic Turkey	1,482,977
Persia	1,262,899
Rest of Asia	3,654,562
Australasia	5,169,399
Total by Sea	291,439,082

The exports by land were as follows:—

Afghanistan	598,976
Total by land	1,154,832

The sea and land exports together make, therefore, a Grand Total of $40,433,163

The total quantity of Indian tea imported into the United Kingdom is not consumed there, a considerable portion being re-exported. The re-exports of Indian tea from the United Kingdom in the past five years have been as follows:—

1912	19,368,000 lbs.
1913	21,830,000 „
1914	30,399,000 „
1915	24,540,766 „
1916	25,819,944 „

The largest quantity of re-exports last year went to the U. S. A., which took 4,700,742 lbs. against 2,655,876 in 1915. Next came Russia, then Canada, Chile, Denmark and the Argentine. It was discovered in 1914 that the ultimate destination of the tea sent to two large customers Holland and Denmark—was Germany and Austria. Germany is not a tea drinking nation, but her troops wanted it. Government first placed an embargo on these re-exports, but as it was proved that Holland could supply Germany with any quantity of tea from Java the embargo was withdrawn.

Features of the Trade.

The most striking features of the Indian tea trade in 1916-17 were as follows: The total exports by sea decreased by 47 million lbs. or 14 per cent. as compared with 1915-16. Shipments to the United Kingdom (ordinarily, 73 per cent. of the exports of India tea is directed to the United Kingdom) decreased by 25,362,000 lbs. or 10 per cent. Russia, which is the second best customer of Indian tea in Europe, took about 9 million lbs. less than in 1915-16. She was much handicapped by freight difficulties, and, especially towards the end of the season, by difficulties in arranging finance. France took only 80,000 lbs. as against 183,000 lbs. in the previous year. The total exports to Europe, excluding the United Kingdom, showed a net decrease of 9,100,000 lbs. as compared with the year 1915-16. Of the African countries, shipments to Cape Colony, Egypt, Madagascar, and Zanzibar and Pemba, increased. The total trade done with Africa increased by 34,000 lbs. Cape Colony showing the most noticeable increase, of 222,000 lbs. which was partly set off by decreases in exports to East African ports and Natal. Of the American countries, shipments to Chile were almost double, but those to Canada and the United States were slightly less, as compared with the preceding year (1915-16). The total exports to America remained practically the same as in the preceding year, namely, 13,200,000 lbs. In Asia, the best customers of Indian tea are China, Ceylon, Persia, and Turkey (Asiatic), and the exports to these countries decreased. Russian Turkistan, to which there were no exports in the two preceding years, took about 913,000 lbs. The trade with China consists almost entirely of tea dust exported to Hankow for the manufacture of brick tea for the Russian market. The total exports by sea to the Asiatic countries decreased by 8,175,000 lbs. Australia, New Zealand and the Fiji Islands took between

them some 4,430,000 lbs. less than in 1915-16. Exports by land decreased by 788,000 lbs. or 41 per cent. The bulk of the exports by land goes to Afghanistan and other countries beyond the north-western frontier. If the exports both by sea and by land are taken together, the net decrease in 1916-17 was nearly 48 million lbs. or 14 per cent. Owing to freight difficulties much tea remained for shipment at the close of the year.

QUANTITY OF EXPORTS.

The following table shows the quantity of Tea exported by sea and by land to Foreign Countries from India, Ceylon, and China, in the years 1896-97 to 1915-16, with variations in index numbers, taking the figure of 1896-97 as 100 :—

—	India.	Ceylon *	China †	
			Black and green.	Brick, tablet & dust.
	lbs.	lbs.	lbs.	lbs.
1896-97 ..	150,421,245 [100]	110,095,194 [100]	161,538,933 [100]	78,567,333 [100]
1897-98 ..	152,344,905 [101]	114,460,318 [104]	137,097,600 [85]	75,781,867 [98]
1898-99 ..	158,539,488 [105]	122,395,518 [111]	147,967,200 [92]	68,017,067 [87]
1899-1900 ..	177,163,999 [118]	129,661,908 [118]	153,669,067 [95]	71,205,067 [91]
1900-01 ..	192,300,658 [128]	149,264,603 [136]	144,270,933 [90]	52,190,667 [66]
1901-02 ..	182,594,356 [121]	144,275,608 [131]	119,390,000 [74]	42,740,533 [54]
1902-03 ..	183,710,931 [122]	150,829,707 [137]	128,226,933 [79]	78,512,400 [100]
1903-04 ..	209,552,150 [139]	149,227,236 [135]	140,607,867 [88]	83,813,600 [107]
1904-05 ..	214,300,325 [142]	157,929,333 [143]	132,366,933 [83]	61,493,733 [78]
1905-06 ..	216,770,366 [144]	171,256,703 [156]	112,152,533 [69]	70,784,267 [91]
1906-07 ..	236,090,328 [157]	171,558,110 [156]	108,864,534 [67]	79,506,133 [101]
1907-08 ..	228,187,826 [151]	181,126,298 [164]	130,022,266 [80]	84,940,000 [108]
1908 09 ..	235,089,126 [156]	181,436,718 [165]	129,265,733 [80]	80,885,733 [103]
1909-10 ..	250,521,064 [167]	189,585,924 [172]	120,174,800 [74]	79,617,600 [101]
1910-11 ..	256,438,614 [170]	186,925,117 [170]	123,947,734 [77]	84,158,943 [107]
1911-12 ..	263,515,774 [175]	184,720,534 [168]	137,788,938 [85]	57,251,467 [73]
1912-13 ..	281,815,329 [187]	186,632,380 [169]	127,826,800 [79]	69,733,200 [89]
1913-14 ..	291,715,041 [194]	197,419,430 [179]	103,038,000 [64]	70,061,600 [89]
1914-15 ..	302,556,697 [201]	191,833,946 [174]	114,680,200 [71]	84,307,733 [107]
1915-16 ..	340,433,163 [226]	211,900,383 [195]	143,662,000 [83]	93,776,667 [119]
1916-17 ..	292,593,914 [194]	208,090,279 [189]	126,260,800 [78]	79,259,723 [101]

* The figures for years previous to 1905-06 relate to the calendar year as it has been found impossible to procure complete data for the official year.

† For calendar year.

The following statement illustrates the variations in prices of the three principal grades of tea sold at the auction sales in Calcutta in 1888 and the six years ending 1915, the average price of 1901 to 1910 being taken as 100 in each case. The figures represent the average of the prices per pound of tea from all districts at each sale :—

Year.	Broken Pekoe.		Pekoe.		Pekoe Souchóng.		Average for all description.	
	Price.	Variation.	Price.	Variation.	Price.	Variation.	Price.	Variation.
	As. p.		As. p.		As. p.		As. p.	
1888	10 3	155	8 1	137	6 3	123	8 8	124
1910	7 3	110	7 0	119	6 4	125	7 10	112
1911	7 9	117	7 7	129	6 9	133	7 11	113
1912	7 5	112	6 11	114	5 9	113	7 8	110
1913	8 1	122	7 5	126	6 10	135	8 2	117
1914	7 10	119	7 8	130	6 11	136	8 3	118
1915	9 1	138	8 6	144	7 10	154	9 5	135

The average price of Indian tea sold at auction in Calcutta in 1916-17 was 8 as. 8 pies per lb. against 8 as. 11 p. in 1915-16 ; and the average declared value of exports by sea was 9 as. 2 pies per lb. against 9. as. 5 p., in 1915-16.

The following table shows the quantity of tea, green and black, available for consumption in India during the years 1909-10 to 1915-16 :—

Year.	Lbs.	Year.	Lbs.
1909-10	.. 13,477,297	1913-14	.. 22,796,764
1910-11	.. 14,224,808	1914-15	.. 19,290,810
1911-12	.. 15,294,472	1915-16	.. 41,11,788
1912-13	.. 21,730,066	1916-17	.. 85,256,846

Capital and Labour.

The number of persons employed in the industry in 1916 is returned at 726,826, namely 634,339 permanently employed, and 92,487 temporarily employed. Compared with the returns of the previous year, there is an increase of 26,234 permanent employes and of 2,267 in the number of temporary hands. The capital of joint stock companies engaged in the production of tea amounted to over Rs. 35 crores or about £23 millions, *viz.*,—

	Rs.
Companies registered in India ..	4,82,31,729
Companies registered in the United Kingdom (£19,925,448)	29,88.81,720
Total ..	34,71,13,449

Trade Prospects.

The Government of India's report on the **production of tea** in India in 1916, which contains the latest available official returns, states that of 118 companies registered in India, which have an aggregate paid-up capital of Rs. 3,46 lakhs, 99 declared dividends for 1915, amounting to 26·5 per cent. on their aggregate capital of Rs. 3,05 lakhs; 80 companies have up to now declared dividends for 1916, amounting to 22·8 per cent. on their aggregate capital of Rs. 2,56 lakhs. The value per Rs. 100 of joint stock capital as calculated on the prices of the shares of 104 companies quoted in the Calcutta share market was Rs. 216·4 in March 1916, and of 111 companies was Rs. 232·4 in March 1917. The report, which is dated November 1917, further states that the present position and prospects of the tea industry appear to be rather uncertain, depending entirely upon the duration of the war. "If (it says) the war continues to 1918, the producers will have to face considerable difficulties, owing to shortage of tonnage, dislocation of finance and exchange, and lack of stores and machinery. A considerable surplus of the past season's crop remains in India and if a normal crop has to be dealt with this season, the result will be a further accumulation of stocks in the country. Statistics up to October, 1917, already tend to indicate this. The exports by sea from British India of Indian tea in the seven months April to October, 1917, although 7 per cent. above those in the corresponding period of 1914, are 14 per cent. less than those of the corresponding period of 1916.....

"There is an accumulation of stocks both at Calcutta, at Chittagong and in the gardens owing to shortage of tonnage. It is believed that certain companies have stocks of last season's teas in hand, while others have sold all the last season's teas. The import into the United Kingdom and Australia of Java and other foreign teas is prohibited. Part of the Indian crop, therefore, will go to Australia, but the balance will have to compete in outside markets with the whole of the Java and China crops. Prices, therefore, are likely to be low. The closure of the Russian market has hit Darjeeling very hard, as Russia used to take a large proportion of the Darjeeling fine expensive teas sold on this market. The situation therefore demands careful consideration on the part of producers, and it has been suggested from some quarters that quality rather than heavy yields is likely to assist in effecting a satisfactory solution of the present position.....".

Since this report was issued it has been officially announced in the House of Commons that the British Food Controller holds the view that tea is a necessary food for the people of the United Kingdom and that, therefore, "all Indian and Ceylon teas required will be purchased and imported and supplies will arrive early in 1918," wholesale as well as retail profits being strictly controlled.

Coffee.

The history of the introduction of coffee into India is very obscure. Most writers agree that it was brought to Mysore some two centuries ago by a Mahommedan pilgrim named Baba Budan, who, on his return from Mecca, brought seven seeds with him. This tradition is so universally believed in by the inhabitants of the greater part of South India, that there seems every chance of its being founded on fact. About the beginning of the 19th century there is no doubt coffee had found its way to India, and in 1823 a charter was granted to Fort Gloster, near Calcutta, authorising it to become a cotton mill, a coffee plantation and a rum distillery. Some of the coffee trees planted in fulfilment of that charter are supposed to be still alive, and about the same time coffee was successfully grown in the Botanic Gardens, Calcutta; but the industry of coffee planting nowhere found an abiding place on the plains of India but migrated to the hills of South India, in Mysore more especially, and thus into the very region where tradition affirms it had been introduced two centuries previously.

The first systematic plantation was apparently Mr. Cannon's near Chikmugiur. This was established in 1830. It is supposed, however, that Major Bevan may have actually grown coffee on the Wynad at a slightly earlier date and that Mr. Cockburn's Shevaroy plantation bears the same date as Mr. Cannon's. In 1840 Mr. Glasson formed a plantation at Manantoddy, and in 1846 plantations were organised on the Nilgiri hills.

The Position of the Industry.—The reported area under coffee has shown a continuous diminution since 1896.

It is reported that in some of the coffee-growing districts coffee is giving way to tea, or where the altitude is not prohibitive, to rubber. The advent of large supplies of cheap Brazilian coffees in the markets of Europe has, by bringing down prices, no doubt injured the coffee industry of India very seriously; but the following figures of export trade show no marked change in the position since 1902. Except in the last two years :—

	Cwts.
1902-03	269,165
1903-04	291,254
1904-05	329,647
1905-06	360,182
1906-07	228,094
1907-08	244,234
1908-09	302,022
1909-10	232,645
1910-11	272,249
1911-12	241,035
1912-13	267,000
1913-14	260,000
1914-15	290,000
1915-16	177,000
1916-17	191,000

The exports to the United Kingdom have in the last few years fallen off considerably, there has been a great diminution in the trade with France, but exports to other Continental countries have shown some increase. No estimate of the quantity of coffee consumed in India can be given.

OILS AND OIL CAKES.

The 1916-17 trade in seeds was marked by a considerable increase in the quantity exported and by high prices and strong demand for linseed in England. The value of the exports increased from Rs. 10,12 lakhs, in the preceding year to Rs. 16,44 lakhs, the increase being accounted for as follows :—Rs. 4,43 lakhs due to greater volume of exports and Rs. 1,89 lakhs to higher prices.

A pamphlet on the subject recently published by the Commercial Intelligence Department points out that it is both economically and industrially unsound for India to export her oil seeds instead of manufacturing the oils and oil cakes in India. It allows other countries to reap the manufacturers' profits and at the same time deprives Indian agriculture of the great potential wealth, as cattle-food and manure, contained in the oil cakes. An immense quantity of oil is, as a matter of fact, already manufactured in this country by more or less crude processes. Village oil mills worked by bullocks and presses worked by hand exist in all parts of the country and supply most of the local demand for oil. There has also been a great increase in recent years in the number of oil mills worked by steam or other mechanical power. These crush all the commoner oil seeds and development has been especially marked in the case of mustard oil, castor oil and groundnut oil. In spite of all this there has been a perceptible diminution in the export of oil from India, particularly of cocoanut oil and linseed oil, and an increase in the export of oil seeds, which is particularly marked in the case of copra and groundnuts. The situation created by the War has naturally led too much discussion of the possibility of developing on a large scale the existing oil-milling industry in India.

There are three difficulties with which any proposal to develop in India an **oil-milling industry** on a great scale is faced. In the first place, there exist high protective tariffs in European countries which encourage the export from India of the raw material rather than the manufactured product. Secondly, there is a better market for the oil cake in Europe than in India and the freight on oil seeds is less than the freight on cake. Thirdly, it is much easier and less expensive to transport oil seeds by sea than it is to transport oil. While this has been the position in the European markets, Indian made oils, other than cocoanut oil, have made enough headway in Eastern markets to suggest the possibility of a development of those markets.

The problem of finding a market for **oil cakes** is equally important. The value of oil cakes is much better appreciated in Europe than in India. The Indian cultivator is prejudiced against the use of machine-made cake as a cattle food or as manure because he considers that it contains less oil and therefore less nourishment than the village-made cake. He is therefore unwilling to buy it except at a reduced price. His prejudices on this point have no justification in fact since experts are agreed that mill cake is a better food for cattle than village-made cake. Even when the mill cake contains less oil than the village cake, there is still more oil in the cake than cattle can digest. The excess of oil in the village cake, where it exists, is a drawback and not an advantage to the use of the cake as food. A considerable amount of demonstration work has been done by the Agricultural Departments of Government in order to remove the cultivator's prejudices and there is said now to be an increasing demand for most classes of mill cake.

The Forests.

The necessity of protecting the vast forest areas in India and Burma was first recognised in the Madras Presidency nearly a century ago, when steps were taken to protect on a limited scale the more valuable areas in the Anamalis, while in December 1886 Doctor Cleghorn was appointed the first Conservator of Forests in that Presidency. It was not, however, until 1856 that Lord Dalhousie laid down a definite policy with the object of affording more widespread protection to the vast areas of valuable forest in British India. The action taken by the Supreme Government came none too soon, for already in many localities the wanton hacking by the local population and even more so by timber contractors, had reduced the forests to a state from which they could not be expected to recover for many years, even under the strictest protection.

Recruitment of the Staff.

In order to introduce a system of conservative management on scientific lines it was of first importance to collect a staff of trained foresters, and as no forest training college existed at that period in England, the Government of India, as a commencement, enlisted the services of three German Forest Officers. The first of these to come to India was the late Sir Detrich Brandis, K.C.I.E., F.R.S. and it was to his extraordinary energy and abilities that a sound foundation was originally laid to the scientific management of the State forests. Soon after his arrival in India, the staff was materially strengthened by the recruitment of officers from the Indian Army. In 1869 the first batch of technically-trained English forest officers joined the service, having received their training either in Germany or France, and this system of continental training remained in force until 1876, after which the training was carried on entirely at the National Forest school of Nancy. The first batch of Coopers Hill trained foresters arrived in India in 1887 and the last in 1907, after which date the training took place at Oxford University, and later also at the Universities of Cambridge, Edinburgh and Dublin. In this way the Government of India have been able to collect by degrees a highly trained staff of men to carry on the administration of their State forests. The total strength of the Imperial Establishment at the present time is 237, of whom 29 are administrative officers and 219 Executive officers, among the latter are included Instructors and Research Officers who are employed at the Forest Research Institute, Dehra Dun.

In order to keep pace with the recruitment of the superior staff, a Forest School was opened in 1878 at Dehra Dun for the training of Forest Rangers. Recently this School has been converted into a College and the instruction extended to include a course for training men for the Provincial Services. Besides the Forest College at Dehra two new Rangers' Schools have been established, one at Pyinmana in Burma and the other at Coimbatore in Madras. Besides this nearly every Province has established a local Forest School for the training of the lower subordinate establishment.

Area of State Forests.

The forests belonging to the State covered in 1915-16, 249,000 square miles, or roughly one-fourth of the whole of India and Burma. Of this 99,205 square miles are Reserved Forests, 9,712 square miles Protected Forests and 140,083 square miles Unclassed forests, by far the greater portion of the latter class occurring in Burma. The distribution of these areas is by no means uniform, the majority being found in Burma, Assam, Northern Bengal and along the foot of and extending into the Himalayas from the Nepal frontier westward through the United Provinces and the Punjab. In the Gangetic valley, in the plains of the Punjab, in Sind and Rajputana few forests occur except along the rivers, nor does one come across large wooded tracts until one enters the Central Provinces and the Godavari catchment area. From there southward in the Satpuras and throughout the North and South Deccan there exist well distributed areas of forests, though generally not in large blocks, while on the Western Ghats, in the Nilgiris and Anamalis, are found some of the finest teak forests of India proper. The East Coast of India is fairly well stocked with forest growth, especially in the Godavari basin, to the west of Cuttack and Puri and again in the Sundarbans, while the Andaman Isles are densely wooded.

Revenue, Expenditure and Outturn.

The gross Revenue from State forests in 1915-16 amounted to Rs. 3,10,46,268, while the expenditure stood at Rs. 1,78,67,431, giving a net revenue of Rs. 1,31,78,837. The total outturn of timber and fuel in that year amounted to 286 million cubic feet, The bamboos removed were valued at 12·7 lakhs of rupees, while the total revenue derived from Minor Products was 117 lakhs of rupees.

From the above figures it will be readily understood that not only is the revenue realised by the State considerable but that the handling of such large amounts of Forest Produce requires a competent staff of officers.

Management.

The system under which the State forests are managed varies in different Provinces. In all cases, however, the aim of the Forest Department has been to introduce Working Plans for their forests, based on European systems of management. The system most usually adopted in India, especially for working the valuable teak and sál forests, is the Selection System, in other words maintaining an equal distribution of all age classes throughout the forest. In a few cases such as in deodar and other coniferous forests and also in a few instances in sál forests, the Uniform Method or a system by which trees of more or less uniform age are grouped together has been applied, and this method of mere intense

management may come into more general use in the future, as a greater number of trained officers become available. In many cases, owing to the destruction of the forests in the past, it has only been possible to prescribe Improvement Felling, though in time a more regular system of working will be introduced. The forests which are destined to supply small building timber and fuel to the local population are generally worked by either the Coppice with Standard or Pure Coppice methods, according to the state and composition of the forest, while certain areas have been put aside for the formation of Fuel and Fodder Reserves or as grazing areas.

Forest Surveys.

The preparations of maps for the State Forests is undertaken by the Great Trigonometrical Survey Department. The area for which detailed surveys have been prepared was roughly 83,866 square miles in 1914-15, to which figure yearly additions are being made. As soon as possible after the compilation of detailed maps, Working Plans are prepared for the forest, and up to 1915-16 about 57,444 square miles of Forests have been dealt with.

Method of Extraction.

Once the forests have been organized and plans of working prepared by an officer put on special duty for the purpose, it remains for the executive officers to arrange for the exploitation of the trees, according to the provisions of the sanctioned plans. This work is carried out in various ways in different localities. Sometimes it is done departmentally, as for instance in certain divisions on the West Coast and also in three or four of the western Pegu Yoma divisions, in Burma. This system which had to be adopted by the Department when work was first commenced and contractors could not be obtained, has now generally been replaced by a system of giving leases to work the forests or by selling the annual coupes standing to contractors. In the case of the valuable teak forests of Burma the system of granting leases for a period of from 10 to 20 years has generally been adopted and has been found to work satisfactorily, the trees for felling being marked by the Forest Department. In other provinces this system has been adopted on a more restricted scale, and in India proper the custom of holding annual sales and selling the trees standing has been found more convenient and profitable. The right to collect Minor Produce is generally put up for auction, which gives the highest bidder the right to collect the produce from the forest for a given period, generally one year. In order to meet the requirements of the local population a system of issuing permits is in force, the permit being issued free to right or privilege holders and on payment of a low fee to other persons. This enables agriculturists to obtain their requirements as to fuel, building timber and grass, etc., without delay and without having to pay enhanced rates to a middleman. The right to grazing is dealt with in the same way.

Important Timbers.

The forests of British India contain a vast number of trees and woody plants, in fact a far greater number than is generally realized by the public. For instance the number of tree species is about 2,500, while the number of woody shrubs and climbers is not far short of that total. Of all Indian species of timber teak stands first, both in quality and as to the amount annually exported from the State forests. Sal comes next in importance and is obtained in the greatest quantities from the United Provinces and Nepal, while a very considerable amount is also available from Bengal, the Central Provinces, Assam and the Feudatory States of Orissa. Of other species of nearly equal importance is deodar, the timber of which is extensively used in construction and as railway sleepers; sandalwood, sissoo and blackwood, the last two timbers being highly prized for building purposes and furniture making; the sundri-wood of the Sundarbans and Bassein, used in boat and carriage building; Andaman and Burman Padauk, used for the construction of gun carriages, furniture and railway carriages; the Pyinkado of Burma, used in building and one of the first sleeper woods in the world; the Red Sandars of Madras, babul, the in or eng wood of Burma, all used for building and for a variety of other purposes and Khair from which "Cutch" is obtained. A great variety of other useful timbers could be mentioned of nearly equal importance to the above, which go to supply the requirements of the enormous population of the Indian Empire.

Minor Forest Products.

Turning now to Minor Forest Products, the most important come under the main heads, fibres, and flosses, grasses, distillation products, oil seeds, tan and dyes, gums and resins, rubber, drugs and spices, edible products, bamboos, canes, and animal and miscellaneous products. The number is very large, while some of them are of considerable economic importance, so much so that they realized over 117 lakhs of rupees in 1915-16. It is not possible to do more than to mention one or two of the most important of these commodities, as for instance myrabolams for tanning. Cutch is of even greater importance, being produced chiefly in Burma and the United Provinces though also prepared on a more limited scale elsewhere. Another equally well known product is lac, produced chiefly in Sind and the Central Provinces which besides being used locally, is annually exported in the form of shellac. Of other Minor Forest Products which deserve mention are rosha and lemon oils; gum kino, babul gum, gurjan oil, thitsi damar and rubber, which are classed as exuded products; sabai grass for papermaking and munj grass for fibre and thatching; mohwa seed yielding a valuable oil, sandal and agar wood oil and the essential oils obtained from them; simul floss used for stuffing pillows; kamella powder and lac dye used for dyeing; podophyllum resin, cassia bark, cardamoms, pepper and strychnine, come under the head of drugs and spices; and a variety of other products often of considerable local values.

From what has been said above it will be seen that the Minor Products obtained from the Indian forests play by no means a small part in the economy and commerce of the country.

The statement below relating to **Exports of Forest Products** is taken from the "Annual Return of Statistics relating to Forest Administration in British India" for 1915-16, recently issued:—

Articles of Forest Produce.	Quantity in Tons of 20 cwt. in the case of teak and other timbers, cubic tons.		Valuation at Port of shipment in 1915–16.	
	Average of 5 years 1910-11 to 1914–15.	In 1915-16.	Total.	Per Ton.
			Rs.	Rs.
Caoutchouc, raw	836	2,354	1,26,67,226	5,381
Lac { Button	1,498	638	5,75,805	903
Lac { Shell	16,285	17,933	1,54,73,836	863
Lac { Stick, seed and other kinds ..	2,053	2,295	11,26,171	491
Cutch and Gambier	3,617	7,276	24,19,989	333
Myrabolams	66,910	69,633	70,52,352	101
Cardamoms	153	215	7,43,958	3,460
Sandal, Ebony and other ornamental woods	(*a*)	(*a*)	15,58,120	....
Teak	51,649	32,403	60,56,864	187
Other timbers (excluding firewood) ..	6,352	3,622	2,56,122	71

	Rs.
Total in 1915–16	4,79,30,443
„ 1914–15	4,17,49,407
„ 1913–14	4,54,25,118
„ 1912–13	4,67,80,613
„ 1911–12	3,96,36,932

(*a*) Quantity (whether by weight or measurement) not recorded.

FOREST INDUSTRIES.

In a brochure published in 1917 the Government officially reviewed their work and indicated the scope of its development and its potentialities. The most interesting part of this memorandum was that which summarised the development of Indian forest industries. First amongst these was placed the Indian pine resin industry. In this it was stated that from very small beginnings in the United Provinces and later in the Punjab the industry has grown until for the year ending 30th June 1916, the annual resin collection in the United Provinces and the Punjab amounted to 69,980 maunds net (2,592 tons), the operations covering 62,000 acres of forest with 2,141,000 blazes or channels in work giving employment to at least 2,400 operatives. The gross revenue was Rs., 5,04,249, the gross trading account profit Rs. 1,73,892 and the net trading account profit Rs. 1,46,794, while the invested capital stood at Rs. 1,61,905. The possibilities of development of the pine industry are considerable.

Next in regard to paper it was pointed out that the present demand is supplied by the mills in India to a small extent. Of the total demand the Indian paper mills produced in normal times about 25,000 tons which during the war has risen nearly to 30,000 tons. The imports of paper and paste board in India in 1914-15 amounted to 51,390 tons valued at £ 709,372 or including note paper at a total of £ 879,298. The demand for paper in India may therefore be put at about 75,000 tons per annum of which India supplies one-third. In the matter of paper pulp India imports 13,250 tons. The most important raw material used in India is Sabai bhabar or baib

grass, which is obtained from the forests of Bengal, Chhota Nagpore, Orissa, Nepal and the United Provinces. The enormous supplies of bamboos and elephant grass available could be utilised for the manufacture of the 50,000 tons of paper and pasteboard which India now imports annually.

Another promising forest industry is matches. The imports of matches in 1914-15 amounted to nearly 15½ million gross boxes valued at Rs. 113 lakhs. The difficulties under which the industry labours is that imported matches are very cheap. Great difficulties had been experienced in obtaining first class indigenous timber within the working figure of cost, railway freight has hit the local trade and the cost of landing the timber at the factory site has in many cases turned out to be excessive. In spite of these difficulties the industry still persists and the solution of the problem in Northern India is found to lie in the erection of portable or semi-portable splint machines in the vicinity of the spruce and silver fir forests and by exporting the prepared splints to central match factories in the plains.

Another promising industry is the antiseptic treatment of timber which has given good results but for its full development requires the establishment of the manufacture of coal tar creosote locally. The following figures show the steady growth of the forest revenue in recent years.

Financial results of Forest Administration in British India from 1864-65 to 1913-14 (in lakhs of rupees).

Quinquennial period.	Gross revenue (average per annum).	Expenditure (average per annum).	Surplus (average per annum).	Percentage of surplus to gross revenue.
	Lakhs	Lakhs	Lakhs	Lakhs.
1864–65 to 1868–69	37.4	23.8	13.6	36.4
1869–70 to 1873–74	56.3	39.3	17.0	30.2
1874–75 to 1878–79	66.6	45.8	20.8	31.2
1879–80 to 1883–84	88.2	56.1	32.1	36.4
1884–85 to 1888–89	116.7	74.3	42.4	36.3
1889–90 to 1893–94	159.5	86.0	73.5	46.1
1894–95 to 1898–99	177.2	98.0	79.2	44.7
1899–1900 to 1903–04	196.6	112.7	83.9	42.7
1904–05 to 1908–09	257.0	141.0	116.0	45.1
1909–10 to 1913–14	296.0	163.7	132.3	44.7

This statement exhibits the striking fact that the surplus has increased nearly ten-fold during the last fifty years, and that it averaged £ 882,000 sterling per annum during the last quinquennial period, without including the large sum represented by the value of forest produce given away free or removed by right holders, which at a rough estimate amounts to over £ 400,000. The increase in the surplus is all the more satisfactory when it is considered that all capital expenditure has been met from revenue and that a considerable proportion of this expenditure is incurred on silvicultural and other operations which as a rule do not show any return for a long period of time.

AREA of FOREST LANDS, OUTTURN of PRODUCE, and REVENUE and EXPENDITURE of FOREST DEPARTMENT.

Province.	Area of Province	Forest Area.				Proportion of Forests to whole Area of Province	Outturn of Produce.		Revenue.	Expenditure.	Surplus.
		Reserved Forests.	Protected Forests.	Unclassed State Forests, &c.	Total.		Timber and Fuel.	Minor Produce.			
	Sq. miles.	Sq. miles.	Sq. miles.	Sq. miles.	Sq. miles.	Per cent.	Cub. ft.	£	£	£	£
Bengal	78,875	4,871	1,711	4,030	10,612	13·5	21,541,749	22,928	86,966	44,729	42,237
United Provinces	106,725	4,261	3,186	40	7,487	7	16,397,510	68,313	209,016	154,516	54,500
Punjab	96,650	2,165	3,961	2,111	8,237	8·5	34,040,355	151,512	95,867	59,287	36,580
Burma (including Shan States)	224,854	28,239	...	114,127	142,366	63·3	53,820,513	56,192	647,180	312,030	335,150
Bihar and Orissa	83,125	1,727	1,063	..	2,790	3·4	18,252,302	15,870	36,652	25,625	11,027
Assam	48,915	4,528	..	18,218	22,746	46·5	1,361,890	54,247	55,525	59,889	—4,364
Central Provinces and Berar	99,947	19,667	..	..	19,667	19·7	38,516,647	150,193	218,169	129,104	89,065
Coorg	1,582	520	..	..	524	32·9	692,030	1,884	13,282	11,722	1,560
North-West Frontier Province	13,057	236	..	..	236	1·8	4,079,842	2,292	15,868	8,373	7,495
Ajmer-Merwara	2,767	142	..	..	142	5·1	364,707	2,477	2,078	1,449	629
Baluchistan	54,228	313	..	472	785	1·4	270,260	2,894	1,271	1,733	—462
Andamans	3,143	85	..	2,122	2,207	70·2	1,755,700	253	22,616	17,204	5,412
Madras	142,261	18,877	..	762	19,639	13·8	26,822,535	113,743	262,769	190,712	172,057
Bombay	123,020	11,949	484	..	12,433	10·1	41,539,419	74,754	312,016	165,862	46,154
Total, 1914-15	1,079,149	97,580	10,405	141,882	249,867	23·15	270,455,459	717,552	*1,980.652	†1,213,763	766,889
1913-14	1,079,638	96,297	8,390	140,925	245,612	22·7	294,643,323	719,927	2,220,103	1,169,564	1,050,539
1912-13	1,079,163	96,867	8,492	133,564	238,923	22·1	290,718,866	738,978	2,147,321	1,147,187	1,000,134
1911-12	1,071,051	96,148	8,496	138,316	242,960	22·7	257,194,423	708,982	1,937,157	1,129,771	807,386
1910-11	1,071,010	96,387	8,507	138,584	243,478	22·7	260,583,175	635,188	1,827,030	1,016,268	810,762
1909-10	1,042,718	96,474	8,814	140,263	245,551	23·5	241,132,930	554,095	1,735,053	994,710	740,343
Totals 1908-9	1,040,872	94,561	8,835	138,378	241,774	23·2	232,035,865	526,669	1,697,120	981,736	715,384
1907-8	1,040,666	94,059	8,853	134,897	237,809	22·8	234,982,123	551,144	1,724,198	967,528	756,670
1906-7	1,042,477	94,037	9,468	136,633	240,138	23·0	222,146,948	504,419	1,766,099	937,587	828,512
1905-6	1,025,345	92,496	10,018	131,137	233,651	22·8	246,334,840	461,300	1,778,306	950,568	827,738
1904-5	1,021,983	92,182	9,435	131,324	232,941	22·8	251,568,276	387,795	1,601,997	864,524	737,473

* Includes £1,377, being the receipt from Imperial and Imperial Forest College and Research Institute.
† Includes £31,528, being the expenditure incurred on account of Imperial, Imperial Forest College and Research Institute and Forest Surveys.

RUBBER CULTIVATION.

The most important rubber-yielding tree found growing naturally in the Forests of India is *Ficus elastica*, a very large tree of the outer Himalayas from Nepal eastwards, in Assam, the Khasia Hills and Upper Burma. It has also been cultivated in Assam in the Charduar plantation in the Tezpur Sub-Division, as also in the Kulsi plantation of the Gauhati Sub-Division in the Kamrup Division. There are also a number of other rubber-yielding trees found in the Indian and Burman forests from which rubber can be collected on terms quoted by Government. Attempts have been made to cultivate Para, Ceara and Castilloa in various parts of India and Burma. In India proper the chief attempts were made on the west coast, about 180 acres being planted from 1908 onward at Gersoppa. Similar attempts have been made in Madras: but at present Para rubber is being grown as a commercial product rather in Burma than the rest of India.

The **production of rubber in India** is confined to Assam, Burma, and the Madras Presidency:—

	Acres.	No. of trees.
Assam	4,681	137,430
Madras	12,022	1,636,476
Burma	29,544	4,911,399
Total ..	46,247	6,685,305

The yield of Assam plantations is relatively small, and the number of trees to the acre is much less than in Madras and Burma. The outturn of Madras in 1913 was more than double that of Burma, where most of the trees being less than six years old are not yet productive. All planting is stump planting about 9 to 12 months old. The trees can be tapped in four years from the date of planting. The average yield in Burma from 4 to 6 years old trees is 1½ to 3 lbs. per tree per year. The capital invested is from £22 to £25 per acre. The average cost of production is about 1*s.* 6*d.* to 1*s.* 10½*d.* per lb.

There has been a steady development in the **exports of rubber from India**. The exports increased from 23,264 cwts., valued at Rs. 79 lakhs, in 1913-14 to 32,825 cwts., valued at Rs. 93¼ lakhs, in the year 1914-15 and to 47,000 cwts., valued at Rs. 126½ lakhs in 1915-16. In 1916-17 exports of raw rubber were 67,000 cwts. valued at Rs. 1,58 lakhs. Nearly seven-tenths of the exports were from Madras and the remainder from Burma.

The Commissioner of Settlements and Land Records, Burma, gives the following rough estimates of future production—

1915	1,500,000 lbs.
1916	1,800,000 „
1917	3,000,000 „

BIBLIOGRAPHY.—For fuller details see "Dictionary of the Economic Products of India" and the abridged edition of the same published in 1908 under the title "The Commercial products of India" by Sir George Watts; and the "Commercial Guide to the Forest Economic Products of India" by R. S. Pearson, published by the Government Press, Calcutta, 1912.

MATCH FACTORIES.

The total **imports of matches** into British India in 1915-16 were over 18 million gross, valued at approximately Rs. 1,38 lakhs or £922,000. In 1916-17 there was a setback in the imports of matches, 11 million gross being imported against 10 million gross in the previous year. British matches have almost disappeared from the market. Japanese matches are ordinarily of very inferior quality, but they are cheap, and as the Indian is content with a poor quality at a low price, these matches are occupying the market to the exclusion of the more highly priced matches and even to the detriment of the cheap Swedish matches. The percentage shares of the United Kingdom, Japan, and Sweden in the pre-war year were 7·53, and 26 respectively; in 1916-17 the percentages were 4·83, and 13. The development of the trade in recent years is of more than ordinary interest, and the figures in the following table speak for themselves:—

	Twelve months, April to March.			
	1913.	1914.	1915.	1916.
Japan .. .. .. 1,000 gross boxes ..	7,299	7,287	10,478	15,278
Sweden .. .. .. „ „ ..	4,226	3,635	2,877	2,321
Norway .. .. .. „ „ ..	1,419	865	649	544
Austria-Hungary .. .. „ „ ..	1,154	1,377	815	..
Belgium .. .. .. „ „ ..	347	307	172	33
Germany .. .. .. „ „ ..	351	189	96	7
Straits Settlements (chiefly of Japanese manufacture) „ „ ..	248	86	166	96
Other countries .. .. „ „ ..	81	148	162	26
Total ..	15,125	13,894	15,415	18,305

In normal years matches are also imported from Austria-Hungary, Germany and Belgium. In the opinion of the Forest experts at Dehra Dun there is an abundance of raw material in this country for match manufacture.

Indian timbers for matches.—In an article in the Indian match industry which appeared in the *Indian Agriculturist* the woods of the following species are said to be employed in Burma for match splints: *Bombax insigne*, *B. malabaricum* (simul), *Anthocephalus Cadamba* (kadam), *Sarcocephalus cordatus*, *Spondias mangifera* (amra), and *Engelhardtia spicata* (palash). These woods are not the best for the purpose, but are those most easily procurable. There are other kinds of white wood, such as

poplar, pine, willow, and alder, in abundant quantities, but they are difficult to extract and transport and are therefore costly.

The attempts to manufacture matches in India have not hitherto been attended with great success, but recently two well-equipped factories have been started in Burma which give promise of good results. One of these is in Rangoon and is owned by Chinese; the other is at Mandalay, and is under European management. Further investigations are said to be necessary in order to settle the question as to the most suitable woods to employ, and when these have been brought to a satisfactory conclusion it is thought that Burma will be able to produce matches of first-class quality. It may be added that in 1912, the latest year for which complete statistics are available, there were six match factories in India.

The Law in India prohibiting the importation of the old sulphur matches as from July 1st, 1913, has not seriously affected the position of the Swedish manufacturers, as they were able to supply another "strike-anywhere" match to take the place of the kind then prohibited, but as the new kind is dearer to manufacture the prices have gone up, and are likely to rise still further.

PAPER MAKING.

This industry before the war did not make the headway in India that had been anticipated, there being only 11 mills at work now with an authorised capital of Rs. 49½ lakhs, from which the output in 1916-17 was 31,900 tons compared with 26,450 tons, the pre-war quinquennial average. Further increases in outturn are hampered by the inability to secure new machinery and the irregular arrivals of chemicals of which the cost continues steadily to rise.

In India the **effects of the war** were immediately felt in the rise in the price of woodpulp, which is used in considerable quantities by mills. The high cost of imported woodpulp and the increasing price paid for raw materials such as baib grass, the cost of transporting the raw material to the mills, and the temporarily high cost of chemicals are the chief obstacles to the development of the local industry. The position may be greatly improved when the new sources of raw materials are exploited and the products made readily available. The total consumption of paper in India is at present estimated at about 80,000 tons per annum, of which over 30,000 tons are manufactured in India, and the balance (chiefly high class stationery) is imported. The war has been of great advantage to Indian paper mills as it has resulted in curtailing the competition from abroad, and Indian mills have accordingly been able, with the decreased supply for consumption, to raise their prices.

There are five large paper mills in the country working on up-to-date Western lines, *viz.*, at Titagarh, Kankinara and Raniganj in Bengal, the Upper India Couper Mills at Lucknow and the Reay Mill at Poona. There are also two smaller mills at Bombay and Surat which make only country paper, and there are one or two other mills which recently were not working. The five large mills have a large Government connection, as the greater part of Government orders for paper is placed in India.

The existence of the local industry depends chiefly on the supply of Sabai grass which on account of unfavourable seasons sometimes yields short crops. It is of great importance, therefore, to look for materials affording a constant outturn, and various reports have been published on the available paper-making materials. Considerable attention has been devoted to **Bamboo**, since 1875 when it was found that this plant—of which there are four chief varieties in India—yielded a fibrous paper stock which made a quality of paper superior to esparto grass and at a considerably less cost. It was at that time estimated that one acre of bamboo would yield 10 tons of dried stems equivalent to 6 tons of merchantable cellulose. In 1905 Mr. R. W. *Sindall* was invited by Government to visit Burma with a view of enquiring into the possibility of manufacturing paper pulp. His report on the subject appeared in March 1906. He made numerous experiments with bamboo and woods of Burma and laid down lines along which further enquiry should be made. Subsequently Mr. W. Raitt, a pulp expert, was engaged at the Forest Research Institute in conducting tests on the treatment of bamboos by the soda and sulphate processes, the treatment of bamboo before boiling, with remarks on the utilisation of nodes and internodes. His results were embodied in the "Report on the investigation of Bamboo or Production of Paper-pulp," published in 1911. Mr. R. S. Pearson of the Forest Service, Dehra Dun, as the outcome of enquiries made throughout India published in 1912 a note on the Utilization of Bamboo for the manufacture of Paper-pulp. The yield per acre from bamboo is larger than that of grasses usually used for paper. The cost of working into pulp has been estimated to yield a product cheaper than imported unbleached spruce sulphite and unbleached sabai grass pulp. In 1915 Mr. Dhruva Sumanas published a pamphlet, Dendrocalamus Strictus Bamboo of the Dangs, as the result of investigations carried on in Bansda State.

The leading Indian **paper grass** for the last thirty years has been the bhaib, bhabar, or sabai grass of Northern India. It is a perennial grass plentiful in drier tracts from Chota Nagpur and Rajmahal to Nepal and Garhwal. The Calcutta mills draw their supplies from Sahibganj, Chota Nagpur and the Nepal Terai. The quantity annually exported from Sahibganj is between three to four lakhs of maunds. The cutting in these districts is said to commence in October when the plants are six or seven feet high. Sabai grass yields from 36·6 to 45·5 per cent. of bleached cellulose.

Imported materials.—Paper-making materials, mostly woodpulp, are normally imported to a great extent from the United Kingdom, Austria-Hungary, Sweden, and Germany. Of chemicals the bleaching material, caustic soda, and sulphur or sulphuric acid are imported chiefly from the United Kingdom. Rosin is already being manufactured by the Forest Department in the United Provinces, from crude resin obtained by tapping pine trees in the Himalayan forests, and the product is taken by the paper mills in India.

Mines and Minerals.

Total value of Minerals for which returns of Production are available for the year 1915 and 1916.

Mineral.	1915.	1916.	Increase.	Decrease.	Variation per cent.
	£	£	£	£	
Coal	3,781,064	3,878,564	97,500	....	+2·6
Gold	2,869,846	2,803,023	....	66,823	—2·3
Manganese-ore	929,546	1,487,026	557,480	....	+60
Petroleum	1,065,182	1,119,405	54,223	....	+5
Salt	660,254	728,358	68,104	....	+10·3
Saltpetre	373,891	607,488	233,597	....	+62·5
Tungsten-ore	296,772	466,604	169,832	....	+57·2
Lead and Lead-ore	316,182	428,383	112,201	....	+35·5
Mica (*a*)	183,947	311,680	127,733	....	+69·4
Building Materials and road metal.	204,652	209,334	4,682	....	+2·3
Silver	31,150	88,687	57,537	....	+184·7
Tinsore and Tin	54,980	71,416	16,436	....	+29·9
Jade Stone	52,070	48,926	....	3,144	—6
Iron-ore	31,886	37,981	6,095	....	+19·1
Monazite	33,238	37,714	4,476	....	+13·5
Ruby, Sapphire and Spinel.	36,298	37,513	1,215	....	+3·3
Chromite	3,531	16,401	12,870	....	+364·5
Magnesite	3,973	14,065	10,092	....	+254
Alum	4,393	6,205	1,812	....	+41·2
Zinecore	174	5,826	5,652	....	....
Clay	3,834	4,645	811	....	+21·2
Copper-ore	14,381	3,259	....	11,122	—77·3
Corundum	277	2,783	2,506	....	+904·7
Steatite	2,578	2,628	50	....	+1·9
Graphite	158	1,501	1,343	....	+850
Ochre	450	941	482	....	+105
Agate	1,019	783	....	236	—23·2
Gypsum	979	745	....	234	—23·9
Antimony-ore	236	503	267	....	+113·1
Bauxite	29	463	434	....	....
Diamond	603	361	....	242	—40
Molybdenite	....	202	202	....	....
Amber	199	157	....	42	—16
Platinum	100	46	....	54	—54
Total	10,457,881	11,923,616	1,547,632	81,897	+14·2
			+1,465,735		

(*a*) Export values.

The feature which stands out most prominently in a survey of the mineral industries of India is the fact that until recent years little has been done to develop those minerals which are essential to modern metallurgical and chemical industries, while most striking progress has been made in opening out deposits from which products are obtained suitable for export, or for consumption in the country by what may conveniently be called direct processes. In this respect India of to-day stands in contrast to the India of a century ago. The European chemist armed with cheap supplies of sulphuric acid and alkali, and aided by low sea freights and increased facilities for internal distribution by the spreading network of railways has been enabled to stamp out, in all but remote localities, the once flourishing native manufactures of alum, the various alkaline compounds, blue vitriol, copperas, copper, lead, steel and iron, and seriously to curtail the export trade in nitre and borax. The reaction against that invasion is of recent date. The high quality of the native-made iron, the early anticipation of the processes now employed in Europe for the manufacture of high-class steels, and the artistic products in copper and brass gave the country a prominent position in the ancient metallurgical world, while as a chief source of nitre India held a position of peculiar political importance until, less than forty years ago, the chemical manufacturer of Europe found among his by-products, cheaper and more effective compounds for the manufacture of explosives.

With the spread of railways, the development of manufactures connected with jute, cotton and paper, and the gradually extended use of electricity the demand for metallurgical and chemical products in India has steadily grown. Before long the stage must be reached at which the variety and quantity of products required, but now imported, will satisfy the conditions necessary for the local production of those which can be economically manufactured only for the supply of groups of industries.

Coal.

Most of the coal raised in India comes from the Bengal—Gondwana coal-fields. Outside Bengal the most important mines are those at Singareni in Hyderabad, but there are a number of smaller mines which have been worked at one time or another.

Provincial production of coal during the years 1915 and 1916.

Province.	1915.	1916.
	Tons.	Tons.
Assam	311,296	287,315
Baluchistan	43,607	42,163
Bengal	4,975,460	4,992,376
Bihar and Orissa ..	10,718,155	10,767,683
Burma	25	....
Central India	139,080	200,285
Central Provinces ..	253,118	287,832
Hyderabad	536,824	615,299
North-West Frontier Province	60	75
Punjab	57,911	47,449
Rajputana (Bikaner) .	17,796	13,841
Total ..	17,103,932	17,254,309

The **growth of the Coal Mining Industry** may be roughly gauged from the following table showing the number of Joint-Stock Coal Companies and their total paid-up capital.

	No.	Rs.
1906-07..	66	260 lakhs.
1907-08..	115	432 ,,
1908-09..	125	658 ,,
1909-10..	128	731 ,,
1910-11..	129	721 ,,
1911-12..	128	722 ,,
1912-13..	139	716 ,,
1913-14..	143	725 ,,
1914-15..	145	744 ,,

A report on the *production and consumption* of coal in India, recently issued by the Department of statistics shows that for the years 1878-1880 the average annual output of the Indian collieries was less than a million tons, whereas in 1915 the total was more than seventeen times that figure. Within the past ten years the expansion has been most marked, the output of 17,104,000 tons in 1915 comparing with a production of 8,417,000 tons in 1905. With the extension of railways and the development of industries, there has been an enormous increase in the consumption of coal in India. Precise information respecting this consumption is not available, but an estimate places the total for 1915 at 16,541,000 tons, of which the railways absorbed 5,187,000 tons. The estimate for the railways, however, relates to the official year 1915-16. The consumption by jute mills in 1915 is estimated at 886,000 tons, by cotton mills at 1,121,000 tons, by iron and brass foundries at 1,332,000 tons, and by brick and tile manufactures at 1,197,000 tons, while bunker coal is stated at 868,000 tons. Other large consumers are inland steamships, which, according to the estimate, took 619,000 tons, and tea gardens, which consumed 165,000 tons. Consumption at the collieries and wastage are computed to have accounted for a further 1,710,000 tons, leaving a balance of 3,296,000 tons for other forms of industrial enterprise and for domestic purposes. There are no data for forming an estimate as to the distribution of the last named total.

Prices.—The considerable increase in the output in 1915 combined with the lack of seaborne transport resulted in a considerable fall in the pit's mouth value in the chief producing areas, the price falling in the Bengal fields from Rs. 3-13-10 per ton in 1914 to Rs. 3-6-2 in 1915, and in Bihar and Orissa from Rs. 3-3-4 to Rs. 2-15-6. In 1916 the average pit's mouth value in Bengal rose to Rs. 3-8-9, and in Bihar and Orissa to Rs. 2-15-10.

IRON ORE.

Bengal and Bihar and Orissa are the only provinces in India in which iron ore is mined for smelting by European methods. Iron smelting, however, was at one time a widespread industry in India and there is hardly a district away from the great alluvial tracts of the Indus, Ganges and Brahmaputra in which slag heaps are not found. The primitive iron smelter finds no difficulty in obtaining sufficient supplies of ore from deposits that no European ironmaster would regard as worth his serious consideration. Early attempts to introduce European processes for the manufacture of pig-iron and steel were recorded in 1830 in the South Arcot District. Since that date various other attempts have been made but none proved a success before that now in operation near Barakar in Bengal. The site of the **Barakar Iron-Works** was originally chosen on account of the proximity of both coal and ore supplies. The outcrop of iron stone shales between the coal-bearing Barakar and Raniganj stages stretches east and west from the works, and for many years the clay ironstone nodules obtainable from this formation formed the only supply of ore used in the blast furnaces. Recently magnetite and hematite have been obtained from the Manbhum and Singhbhum districts, and the production from the last named district has largely replaced the supplies of ore hitherto obtained near the iron-works. The Bengal Iron and Steel Company, Limited, have now given up the use of ores obtained from the neighbourhood of Barakar and Raniganj and are now obtaining their ores exclusively from the Kolhan Estate, Singhbhum. The deposits are known as Pansira Hill and Buda Hill situated about 12 miles and 8 miles south-east of Manharpur Station, Bengal-Nagpur Railway. The total quantity of ore in these two deposits has been estimated to be about 10 millions tons. **The Tata Iron and Steel Company** at Sakchi possesses slightly richer and purer ore-bodies in the Raipur district, supplies of ore are at present drawn from the deposits in Mayurbhanj. The ore-deposits have all been found to take the form of roughly lenticular leads or bodies of hematite, with small proportions of magnetite, in close association with granite on the one hand and granulitic rocks on the other. These latter have been noted in the field as charnockites, the term being employed, rather loosely no doubt, but probably in the main correctly, to cover types of pretty widely varying acidity. In still more intimate association with the ores than either of the foregoing were found masses of dense quartz rocks, frequently banded, and banded quartz-iron-ore rocks. These last are of the types so commonly associated with Indian iron-ores, but are here not so prominent as is usually the case.

There was a slight increase in the *output of iron ore* in 1916, as it rose by about 20,000 tons to 411,758, of which nearly 241,000 tons were won in the Mayurbhanj State and over 150,000 tons in Singhbhum. The former material was employed by the Tata Iron and Steel Company, and the latter by the Bengal Iron and Steel Company. These companies produced 152,460 tons and 92,250 tons of pig iron, respectively, the Tata Company producing also 92,902 tons of steel, including steel rails and the Bengal Company 30,605 tons of cast iron castings.

MANGANESE ORE.

This industry commenced some twenty years ago by quarrying the deposits of the Vizagapatam district, and from an output of 674 tons in 1892, the production rose rapidly to 92,008 tons in 1900 when the richer deposits in the Central Provinces were also attacked, and are now yielding a larger quantity of ore than the Vizagapatam mines. India now alternates with Russia as the first manganese-producing country in the world. The most important deposits occur in the Central Provinces, Madras, Central India, and Mysore—the largest supply coming from the Central Provinces. The uses to which the ore is put are somewhat varied. The peroxide is used by glass manufacturers to destroy the green colour in glass making, and it is also used in porcelain painting and glazing for the brown colour, which it yields. The ore is now used in the manufacture of ferromanganese for use in steel manufacture. Since 1904, when the total output was 150,190 tons, the progress of the industry has been remarkable owing to the high prices prevailing. In 1905 production reached 247,427 tons; the following year it was more than doubled (571,495 tons), and in 1907 the figures again rose to 902,291 tons. In 1909, on account of the fall in prices the output contracted to 642,675 tons, but it almost regained its former position in 1910 when the production rose to 800,907 tons. In 1911 it fell to 670,290 tons. In 1916 the output was 645,204 tons valued F.O.B. at Indian Ports at £ 1,487,026. The ore raised in the Central Provinces is of a very high grade, ranging from 50 to 54 per cent. of the metal, and in consequence of its high quality is able to pay the heavy tax of freight over 500 miles of railway, besides the shipment charges to Europe and America, for the whole of the ore is exported to be used principally in steel manufacture in the United Kingdom, Germany and the United States.

Manganese was one of the minerals which were largely affected by the war, the exports being restricted almost entirely to consignments to the United Kingdom, with a comparatively small quantity to the United States; the quantity exported fell from about 538,000 tons in 1914 to less than 420,000 tons in 1915. The latter figure rose to 580,328 in 1916, valued at £ 767,717.

GOLD.

The greater part of the total output of gold in India is derived from the Kolar gold field in Mysore. During the last decade the production of this mine reached its highest point in 1905 when 616,758 ounces were raised. In 1906 the quantity won was 565,208 ounces and this figure fell to 535,085 ounces in 1907. The figures for the latter years reveal a small improvement. The Nizam's mine at Hutti in Hyderabad comes next, but at a respectable distance, to the Kolar gold field. This mine was opened in 1903. The only other mines from which gold was raised were those in the Dharwar district of Bombay and the Anantapur district of Madras. The Dharwar mines gave an output of 2,993 ounces in 1911 but work there ceased in 1912. The Anantapur mines gave their first output of gold during the year 1910, the amount being 2,532 ounces, valued at Rs. 1,51,800. Gold mining was carried on in the North Arcot district of Madras from 1893 till 1900, the highest yield (2,854 ounces) being obtained in the year 1898. The Kyaukpazat mine in Upper Burma was worked until 1903, when the pay chute was lost and the mine closed down. In 1902 dredging operations were started on the Irrawaddy river near Myitkyina, and 216 ounces of gold were obtained in 1904; the amount steadily increased from year to year and reached 8,445 ounces in 1909, but fell to 5,972 ounces in 1910 increasing again to 6,390 ounces in 1911 and being in 1913, only 5,393 ounces. The gold craze, which was prevalent in Rangoon a few years ago, has disappeared as suddenly as it sprang up. The Burma Gold Dredging Company holds right to dredge for gold in the bed of the Irrawaddy river and notwithstanding the obstacles encountered from time to time in the shape of floods, etc., the company has so far been fairly successful in its operations. The small quantity of gold produced in the Punjab, the Central Provinces, and the United Provinces is obtained by washing. Gold washing is carried on in a great many districts in India, but there is no complete record of the amount obtained in this way. The average earnings of the workers are very small, and the gold thus won is used locally for making jewellery.

Quantity and Value of Gold produced in India during 1915 and 1916.

	1915.		1916.	
	Quantity.	Value.	Quantity.	Value.
Bihar and Orissa—	Ozs.	£	Ozs.	£
Singhbhum	450	1,800	864	3,977
Burma—				
Myitkyina	3,106·83	11,913	1,901·05	7,289
Katha	16·99	91	21·21	85
Upper Chindwin	50·25	295	46·96	276
Shwebo	7·31	36	7·41	36
Salween	1·20	5	6	24
Hyderabad	17,869·7	68,338	18,657·2	71,577
Madras	23,870	101,324	22,371	94,789
Mysore	571,199	2,185,409	554,301	2,124,129
Punjab	149·59	604	186·23	810
United Provinces	7·37	31	7·63	31
Total ..	616,728·24	2,369,846	598,369·69	2,303,023

PETROLEUM.

Petroleum is found in India in two distinct areas—one on the east, which includes Assam, Burma, and the islands off the Arakan coast. This belt extends to the productive oil fields of Sumatra, Java, and Borneo. The other area is on the west, and includes the Punjab and Baluchistan the same belt of oil-bearing rocks being continued beyond the borders of British India to Persia. Of these two the eastern area is by far the most important, and the most successful oil fields are found in the Irrawaddy valley. Yennangyaung is the oldest and most developed of these fields. Native wells have been at work here for over 100 years, and in 1886, prior to the annexation of Upper Burma, the output is estimated to have averaged over 2 million gallons a year. Drilling was begun in 1887. The Yenangyat field yielded a very small supply of petroleum before 1891, in which year drilling was started by the Burma Oil Company. Singu now holds the second place among the oil fields of India. Petroleum was struck at the end of 1901, and in 1903, 5 million gallons were obtained. In 1907 and 1908 the production of this field was 43 million gallons, and after a fall to 31½ million gallons in 1910 it rose to 56½ million gallons in 1912. Several of the islands off the Arakan coasts are known to contain oil deposits but their value, is uncertain. About 20,000 gallons were obtained from the eastern Barongo Island near Akyab, and about 37,000 gallons from Ramri Island in the Kyaukpyu district during 1911. Oil was struck at Minbu in 1910, the production for that year being 18,320 gallons which increased to nearly 4 million gallons in

1912. The existence of oil in Assam has been known for many years and an oil spring was struck near Makum in 1867. Nothing more however, was done until 1883, and from that year up till 1902 progress was slow. Since that year the annual production has been between 2½ and 4 million gallons.

On the west, oil springs have been known for many years to exist in the Rawalpindi and other districts in the Punjab. In Baluchistan geological conditions are adverse, and though some small oil springs have been discovered, attempts to develop them have not hitherto been successful.

Quantity and value of Petroleum produced in India during 1915 and 1916:—

	1915.		1916.	
	Quantity.	Value.	Quantity.	Value.
Burma—	Gallons.	£	Gallons.	£
Akyab	12,045	231	11,882	226
Kyaukpyu	23,220	716	68,848	321
Magwe (Yenangyaung and Singu).	198,809,315	765,240	240,194,063	924,534
Mylngyan (Singu)	77,005,880	256,686	44,105,013	147,030
Pakokku (Yenangyat)	4,099,345	15,525	5,310,740	19,930
Minbu	2,316,207	9,651	2,043,542	8,516
Thayetmyo	25,920	108	35,000	293
Assam—				
Digboi (Lakhimpur)	4,550,150	15,009	5,236,890	17,274
Punjab—				
Attock	250,000	2,000	182,480	1,216
Mianwali	1,494	16	1,334	14
Tota	287,093,576	1,065,182	297,139,787	1,119,405

Imports of **kerosene** during 1915 were considerably less than in the preceding year, the total quantity imported falling from nearly 87 million gallons to a little over 68 million gallons. In 1916 the imports fell to nearly 58 million gallons, valued at £1,949,946. The decrease was chiefly in exports from Borneo, which fell by about 30 per cent. There was also a small decrease in imports from America. Exports of paraffin wax, on the other hand, rose appreciably from a little over 19,000 tons in 1915 to 21,000 tons in 1916.

Amber, Graphite and Mica.—Amber is found in very small quantities in Burma; the output for 1916 being 5½ cwt. valued at £157. Graphite is found in small quantities in various places but little progress has been made in mining except in Travancore. India has for many years been the leading producer of mica, turning out more than half of the world's supply. In 1914, owing to the war, the output was only 38,189 cwts. compared with 43,650 cwts. in 1913. Owing to necessary restrictions with regard to the export of mica, the output fell off considerably in the year 1915, but subsequent demand in the United Kingdom for the best grade of ruby mica led to a considerable increase in production during 1916, the total output being nearly 2,000 tons valued at over £109,000. The amount exported in 1916 was 2,735 tons.

Tin, Copper, Silver and Lead.—The only persistent attempt to mine tin is in Burma. The output was for sometime insignificant but rose in 1913 to 116 tons valued at £46,000 which fell to £38,000 in 1914. But in 1916 the value of the output rose to £71,416. Copper is found in Southern India, in Rajputana, and at various places along the outer Himalayas, but the ore is smelted for the metal alone, no attempt being made to utilize the by-products. The only *lead* mine of any importance being worked in the Indian Empire is that of Bawdwin, where a very large body of high-grade lead-zinc-silver ore has now been blocked out. For many years the smelting operations of the Company were directed to recovering lead and silver from the slags left by the old Chinese miners. Those slags, however, are now practically exhausted, and the mine has reached a stage of development at which a steady output of ore is assured. Nearly 9,000 tons of ore were produced during 1916 as against 4,000 tons in the preceding year. On the other hand, the production of slag fell from 32,534 tons in 1915 to 4,771 tons in 1916. The total output of lead was 13,790 tons, valued at £428,065, and that of silver 759,012 ounces, valued at £88,552. *Zinc* has not yet been smelted at Bawdwin; before the war, the concentrates were exported to Belgium and Germany; exports practically ceased in 1914, but Japan took a certain quantit in 1916, the total exports during that year amounting to 3,224.6 tons, valued at £16,266. **Silver** is obtained as a by-product in the smelting of the lead-zinc ores of Bawdwin. The output from that source during 1916 was 759,012 ounces, being an increase of nearly 500,000 ounces over the output of the preceding year. There was also a considerable increase in the Anantapur output, which, however, only amounted to 1,362 ounces as against 512 ounces in the preceding year.

Gem Stones.—The only precious and semi-precious stones at present mined in India are the diamond, ruby, sapphire, spinel, tourmaline, garnet, rock-crystal, agate, cornelian, jadeite and amber. Amber has already been referred to; of the rest only the ruby, sapphire and jadeite attain any considerable value in production and the export of the latter has declined owing to the disturbances in China, which is the chief purchaser of Burmese jadeite. The output of diamonds is comparatively unimportant. The ruby-mining industry of Burma has lately undergone a favourable change. In 1915 the output of gems was 251,000 carats.

Wolfram.—A marked feature of the development of the mineral industries of India during recent years is the rapid rise of the wolfram industry in the districts of Merguj and Tavoy in Lower Burma. Although there was an output of 7 tons from Mergui in 1909, the industry dates practically from the following year, 1910. The output of wolfram in Burma rose from 1,688 tons valued at £127,762 in 1913 to 2,326 tons valued at £178,543 in 1914-15. According to an official note on the mineral production of Burma in 1916, the production of wolfram has increased from 2,546 tons in 1915 to 3,680 tons in 1916. The Tavoy District alone produced 3,034 tons, or more than 1,000 tons above the output from that district in the previous year. In consequence of the need for wolfram for the manufacture of high-speed steel, special measures were taken by Government to encourage the output. Several of the larger firms in Rangoon were induced to take up wolfram concessions; the shortage in the supply of labour at the mines was met by the importation of Chinese and Indian labourers through Government agency; the Deputy Commissioner, Tavoy, was relieved of his other duties in order that he might give special attention to wolfram mining; and the services of two Geological Officers, a Government Mining Engineer and an Officer of the Chinese Protectorate in the Federated Malay States were lent to the Local Government to assist in the control of mining methods and of the labour employed on the mines. On many of the smaller mines and on some of the larger ones, the methods of working still leave much to be desired, but with the introduction of a greater number of firms of standing and with the more efficient control which is now being exercised, there has been a marked improvement both in output and in methods of mining employed.

According to the Director of the Geologica Survey, the total production of the world is about 8,000 tons per annum of concentrates carrying from 60 to 70 per cent. of tungstic trioxide. Of this Burma produces one quarter. In Siam the mining of wolfram is a recent development. Wolfram is also produced in Australia and in the Malay Peninsula. Formerly, Germany used to take over 50 per cent. of the total exports from India, but this is one of the minerals of which the export was restricted owing to the war.

Quantity and Value of Tungsten-ore produced in India during 1915 and 1916.

	1915.		1916.	
	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£
Bihar and Orissa—				
Singhbhum	....	....	8	640
Burma—				
Mergui	232.3	29,554	528.6	53,566
Southern Shan States	330.7	24,802	428.1	29,277
Tavoy	2,032.9	235,827	2,689.8	366,428
Thaton	49.4	6,589	72.7	10,115
Central Provinces—				
Nagpur	....	....	1.3	220
Rajputana—				
Marwar	....	....	32.7	6,358
Total	2,645.3	296,772	3,761.2	466,604

Radio-active Minerals.—The General Report of the Director of the Geological Survey of India for 1913 includes a brief report by R. C. Burton on an occurrence of pitchblende at mica mines near Singar, Gaya district, Bengal. The pitchblende occurs as rounded nodules in a pegmatite that is intrusive in mica schists. Other minerals occurring in the pegmatite are mica, triplite, ilmenite, tourmaline, and uranium ochre; whitish columbite, zircon, and torbernite have also been recorded. Of these minerals triplite is stated to be the commonest.

The importance of the find of uranium oxide impregnating the triplite led to the discovery of weathered pitchblende, and as the pits were deepened the weathering became less and less until pure pitchblende was obtained. In the six months from July 1913 to February 1914, eight hundredweight of pitchblende was obtained from Abrakhi Hill together with six tons of uranium earth debris, five to six hundred tons of triplite and two tons of tantalite. These ores were raised under a prospecting license in respect of Abrakhi Hill alone and in March 1914, a mining lease for thirty years was obtained in respect of sixty square miles of the Singar estate. The first intention was to work only the five square miles round Abrakhi and a syndicate was formed for this purpose, which on the outbreak of war, was refused a Trading License on account of the German element in it.

Labour in Mines.

The question of the labour supply presents difficulties which are not encountered in countries where mining is a special calling. The majority of the persons working at the Indian coal mines are agriculturists, and the supply of labour, as experience has recently shown, depends to a material extent on the condition of the agricultural industry. "The major portion of those employed," says a report by the Department of Statistics, "are the aboriginal Dravidians from the mountainous country of Chota Nagpur and the Central Provinces, but a large number of other castes is also employed, particularly in the outlying fields. The majority of the workmen follow the vocation of agriculture as well as mining and return to their homes during the period of sowing and reaping, the result being that at such times the output of many of the mines is greatly restricted. At the Makum collieries of the Assam Railway and Trading Company, where the labour question continues to be a very difficult one, nearly a third of the total labour force are Mekranis, Chinese, and Nepalese. The Chinese have, however, proved unsatisfactory, and it is unlikely that they will in future be recruited." With the increase in the depth of working the need for a skilled mining class will become accentuated, and if the price of coal remains at a sufficiently high level, further development in the introduction of coal-cutting plants may take place. During the period of high prices some nine years ago cutting plants were introduced in order to augment the output. These worked successfully, but the cost proved to be high and as labour conditions improved the machines were discarded.

Inspection of Mines.

During the year 1916 the average number of persons working in and about the mines regulated by the Indian Mines Act was 197,919 of whom 127,289 worked underground and 70,630 on the surface. One hundred and twenty-four thousand seven hundred and seventy were adult males, 66,855 were adult females and 6,294 were children under 12 years of age. This is a decrease of 17,831 workers or 9·90 per cent. Those employed in coal mines numbered 143,459, which is a decrease of 2,078, as compared with those employed in 1915.

Accidents.—During the year 1916, at mines regulated by the Indian Mines Act, 1901, there were 140 fatal accidents, being a decrease 23 on the number in 1915 and a decrease of 4 on the average number in the previous 5 years. There would have been a still further decrease, if the accidents in Wolfram mines had not increased considerably. These accidents involved the loss of 206 lives, which is the largest number since 1913. As in that year, certain accidents occasioned loss of life on a large scale. Twenty-four lives were lost by a sudden subsidence of the surface, owing to the collapse of underground workings, 14 by an explosion of firedamp, 9 by the bursting of a dam in a river, 6 by the collapse of a winding rope attachment, and 4 by a fall of roof. Number three of these occurred at a Wolfram mine and the remaining four at Coal mines.

Of these 140 accidents, the Chief Inspector of Mines regards (*a*) 67 being due to misadventure, (*b*) 31 to the fault of the deceased, (*c*) 10 to the fault of fellow workmen, (*d*) 13 to the fault of subordinate officials and (*e*) 19 to the fault of the management. The great majority of accidents, as in other parts of the world, continue to be caused by falls of roof and sides. In the year under report they numbered 70, being a decrease of 15, as compared with the previous year. Forty-nine of them occurred in the coal-fields of Bengal and Bihar and Orissa, and in 21 cases they were attributable to the fault of the deceased. Going through fences, to rob pillars was the cause of 14 accidents. Next to falls of roofs and sides the most numerous accidents occur in shafts, by haulage and on the surface. During the year under report there was a small increase in accidents in shafts, from various causes. Haulage accidents showed a gratifying diminution, being only 12 in number. This is the smallest number for many years. Surface accidents showed a small decrease, but the figure is still high. The increased use of electrical power at mines is bringing in its train its specific accidents. There were four such fatal accidents, resulting in five deaths, in the year under report.

The **death-rate** per thousand persons employed was 1·04, while that of the preceding five years was 1·15. At coal mines only these figures were 1·14 and 1·32 and at mines other than coal 0·64 and 0·70. At coal mines in England during the ten years ending with and including 1914, the death-rate per thousand persons employed varied from 1·08 (lowest) to 1·69 (highest). The death-rate per million tons raised at coal mines only was 10·15 while that of the preceding five years was 11·57. At coal mines in England during the ten years ending with and including 1914, the death-rate per million tons raised varied from 4·31 (lowest to 6·37 (highest).

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Industrial Arts.

"The Arts of India," wrote Sir George Birdwood in the first lines of his book on the industrial arts of India which has now become a classic, "are the illustration of the religious life of the Hindus, as that life was already organised in full perfection under the code of Manu, B. C. 900-300." Whether that statement be accepted in its entirety or not, some knowledge of the religion of the Hindus is most essential to an understanding of their arts. That subject is dealt with elsewhere in this book and so is the subject of caste, of which a knowledge is equally important in this connexion. But, by way of preface to a brief outline of some of the more important art industries of the country, it may be well to state what is the basis of practically the whole industrial system of India. The child learns his hereditary craft from his father or is apprenticed to a *mistri*, or master-craftsman, who is often a relative of the pupil. There is no regular fee, but a small present is often paid to the owner or foreman of the shop, and in some trades a religious ceremony may take place at the time of apprenticeship. The child begins his work at a very early age; at first he is expected to undertake the menial duties of the shop and is put to cleaning the tools; later he begins to perform the simplest operations of the trade. There is little definite instruction, but the boy gradually acquires skill by handling the tools and watching the workmen at their task. As soon as he has made a little progress, the apprentice is granted a small wage which is gradually increased as he becomes more useful; and when his training is finished, he either goes out into the world or secures a place on the permanent roll of his master's shop. To the poor artisan the arrangement has this great advantage, that at a very early age the child earns his livelihood and ceases to be a burden on his parents. In former days the system answered well enough for the rude village industries which satisfied the needs of the bulk of the population, and it also succeeded in maintaining a class of workmen who dealt in metals and textile fabrics with such sense of form and colour that their work has challenged comparison with the most artistic products of the West. It has not, however, enabled the Indian artisans to keep abreast with modern industrial development. Imported articles have to a considerable extent supplanted the products of home industry, the quality of Indian work has in many cases deteriorated, and the workman has neither taken due advantage of the wide openings afforded to him by advancing civilisation and trade, nor adhered rigidly to old methods and traditions. The efforts made to assist him have not as yet been attended with a great measure of success, but the potentialities of the Schools of Art and Technical Institutions are only beginning to be appreciated.

Wood-carving.

Indian wood-work, which must come first in importance in the art products of the country, shows great diversity, and many points of interest, and the wood-carvers of the country, have gained a well-deserved reputation outside India. The more noteworthy crafts include carving as applied to architecture, furniture, and cabinet work inlaying with other woods or metals, veneering, and lattice-work. The art and industrial schools of Calcutta, Madras, Bombay and Lahore have given much attention to developing these crafts on indigenous lines, with the result that degeneration has to a large extent been prevented and a superior class of carpenters, dispersed over the country. On a smaller scale, objects are carved in sandal-wood with a minuteness and intricacy of elaboration only equalled by the results attained in ivory. As to style, there is a great variety of types throughout the country, the two chief influences on the art conception being religion and the nature of the wood used. Mahomedan and Sikh work—for example, is largely constructed on a geometric basis, though in the modern Sikh work as in the Hindu—grotesque animal forms or mythological subjects are freely introduced. The woods chiefly used for ornamental work are teak, *shisham*, deodar, sandal-wood, ebony, walnut, *tun*, *nim*, Madras red-wood (sometimes called black-wood), *dudhi* (white-wood), red cedar, *sal*, *babul*, and others of less importance. Deep under-cutting and sculpture are possible with teak, red-wood, and walnut; whereas *shisham* and deodar can be used only for low relief work. In recent years a great demand for cheap and inferior carving—on tables and other articles alien to the Indian mind—has sprung up in Europe and America and has been met by the export of vast quantities of poor work, for which the soft woods only are used while bone takes the place of ivory in inlaying. "In these abominations," writes Sir George Watt in the catalogue of the 1903 Exhibition at Delhi, "it is thought sufficient proof of an Indian character to introduce some portion of a mosque or temple, and that being done all attention to such details as suitability of design or nature of ornamentation can be disregarded."

Metal Work.

The purely indigenous or village metal manufactures are perhaps, after those connected with wood, the most important of all the art industries of India. Most of the *household* utensils are made of metal, which thus to a large extent take the place of the porcelain and glass of Europe. Brass is most frequently employed by Hindus and copper by Mahommedans, the copper vessels being generally tinned for safety. Every large village has its copper and ironsmiths and also its jeweller, and in some instances these local industries attain considerable magnitude, as is the case with the manufacture of copper and brass vessels at Srinagar, Benares and other towns. The making of ornamental bowls, vases, trays, and other European articles constitutes an important industry in many places, and a variety of processes is of course employed such as enamelling, damascening, and colouring either with lac or paint. The provinces of India have each two or three centres noted for their copper or brassware, and there are as many different art conceptions as centres. Some of the styles are well known all over the world, such as the Benares

style of punched brass, which is as a rule bad in design and execution, and the engraved or repoussé work in polished brass that comes in large quantities from Jaipur. Better than either of those are the perforated and repoussé copper work of Lucknow, the best products of Bombay, Poona, and some of the southern India centres, and the gongs and idols made in Burma. Ordinary domestic utensils, which are free from ornamentation so that they can be readily scoured, and the more elaborate implements used for religious ceremonials are among the most and beautiful interesting metal wares in India; but they vary in style and finish throughout the country. Sir George Watt writes:—

"The copper or brass vessel of most general use by the Hindus is the *lota*, a globular melon-shaped vessel flattened from the top and having an elegantly reflexed rim by which it is carried suspended between the fingers and thumb. In shape this doubtless originated from the partially expanded flowers of the sacred lotus, its name thus coming from the same root as the Latin *lotus*, "washed," and the English lotion "a wash". With the Mahomedans the *lota* (or *tonti*) has been given a spout because the Quran ordains that a man shall perform his ablutions in running water, hence the water when poured out of the *tonti* is considered to be running water. It is carried by holding the rim at one side and it thus dangles instead of being (as with the Hindus) suspended from the middle of the hand. The shapes of the *lota* and *tonti* and their respective uses have given birth to two widely different forms of both domestic and decorative metal work characteristic of India. For example, the spout and the use of copper, more especially when tinned, has originated a whole range of forms and designs not only quite unknown to the Hindus but next to impossible with the materials permitted by their religion." It is scarcely possible any longer to divide the gold and silver plate work of India into four or five well defined classes distinguished by the style of ornamentation, as the workers in these metals have been quick to adopt a variety of European models. In *Madras* mythological medallions, in imitation of the encrusted style of Southern India art, still form the characteristic feature of much of the silver work. In Bombay two distinctive forms survive, the Poona and Kutch: of these the former is a deep form of repoussé, the silver usually being oxidised, the latter has a floral design of European origin in shallow repoussé. Rangoon work is generally known by the frosted surface of the silver and Moulmein work by the silver being either polished or burnished. But in almost every case the design of one province is copied in another, and the best forms of ornamentation, such as the shawl pattern of Kashmir, have fallen into disuse either because of the labour involved in their production or because the smiths have found by experience that it is just as easy to sell inferior work.

Great varieties of form and style are to be seen in the arms and jewellery made in India. Sir George Birdwood in his "Industrial arts of India" says that "the forms of Indian jewellery as well as of gold and silver plate, and the chasings and embossments decorating them, have come down in an unbroken tradition from the Ramayana and Mahabharata." The old types survive side by side with the copies of articles imported from the Rue de la Paix, and in any Indian jeweller's shop a bewildering mixture of the archaic and the modern is to be seen.

Shawl and Carpet Weaving.

It is only in Northern India (more especially in Kashmir) that the spinning and weaving of wool extends to the production of highly-finished and artistic goods. Scattered here and there all over the country are hand-loom factories where coarse blankets, carpets, and other fabrics are produced. This indigenous wool industry is most important in the Punjab. The great centre of shawl production is Kashmir; the industry has also been carried on for many years in parts of the Punjab, where it was introduced by colonies of Kashmir weavers. France was for many years the chief foreign market for Kashmir shawls, and the trade, which was damaged also by the competition of cheap imitations produced at Paisley, never recovered from the effects of the Franco-German War. The bulk of the Kashmir shawl-weavers became carpet-weavers or agriculturists. The latest report from the Punjab regards the case of the genuine shawl industry as "almost hopeless." Carpet-weaving is carried on in various parts of the country. It is one of the many industries which is said to have been ruined by modern civilisation, and in so far as many carpet factories in India are turning out an inferior article, according to designs furnished by dealers in Europe, this is correct. But it is wrong to ascribe the cheapening of the caste weaver's product and his increased output to underselling by those jails in which the weaving of carpets has been introduced as an occupation for prisoners. On the other hand the jails, and especially that at Yerrowda, near Poona, have set a high standard by conserving old designs, by using good material, and by avoiding the use of aniline dyes. Since the London Exhibition of 1851 a considerable export trade in Indian pile carpets has been created. Amritsar, which caters for the American market in particular, is the most important carpet-weaving centre in India, but there are factories in many other places in Northern India, Rajputana, Central India and the United Provinces. In the lower provinces the industry hardly exists. Cotton and woollen carpets in other than pile stitch are made all over India. They are known as *dari* (a rug) and *shatranji* (a carpet) and are made in great variety. The poorer classes of Mahomedans generally use the cotton manufactures as praying carpets.

Apart from woven mats or carpets there is manufactured a great variety of so-called mats made from grass and other materials such as aloe, bamboo, coir, date and other palm leaves. Mats or rather screens (tatties) made of the sweetly scented *Khas-khas* are hung in front of doors; etc., to afford shade and to cool, by evaporation, the air which passes through the moistened texture. Bamboo mats are manufactured here and there all over India, and in Bengal more especially *darma* mats (those constructed of reeds) are all but

universally used in house-construction. The traffic in *darma* mats must, therefore, be very great, and give employment to a far larger number of persons than can be learned from published statistics. In some of the jails aloe-fibre mats are produced and find a fair market, while cane mats are not uncommon. These are formed by selected canes being placed parallel to each other and bound in position by cross-ties. They are exceptionally strong, and especially valued in public offices where there is much traffic.

Embroidery.

This is one of the most important of the art industries of India attaining its highest development in Northern India. The stitches employed in the various kinds of work are numerous, but all have this in common that they are formed by the needle being pulled away from and not drawn towards the worker. Mrs. F. A. Steel has written a description of the Punjab darn stitch, known as *pulkhari*, but most of the varieties still await their historian. Darn stitch is chiefly used on coarse cotton and chain stitch on silk or woollen fabrics, the former covering the textile the latter ornamenting parts of it. European demands have led to the production of large quantities of silk embroidery, in which coloured silks and gold and silver wire are employed, for curtains, table cloths and so on. Another common form of embroidery is what is called chikan work on some white washing material such as calico or muslin: in this the most usual form of stitch is the satin stitch combined with a form of button holing. The manufacture of lace and knitting have been introduced into India by missionaries. "Laid" embroidery with gold and silver wire (called *karchob* work because it is done on a frame) is common throughout the country in different forms. The wires are drawn in a number of centres, particularly in Lahore, Delhi, Agra, and Benares: the details of wire drawing and the form of stitch, together with the combination with precious stones and silk, make a great number of classifications of this work possible. A rough division between the two forms is that the massive kind is called *zardozi* and the light and graceful *kamdani*.

Ivory.

The carving and inlaying of ivory are still though perhaps in diminished importance, arts much practised in India. The best material used is African ivory, which is whiter and of closer grain than the Indian, but Sir George Watt has pointed out that the "fish tooth" ivory, or Mammoth ivory of Siberia, is also used by Indian workers. The centres of the craft are Delhi, Murshidabad in Bengal, Mysore, Travancore, and Moulmein. A curious fact about this industry is that, though carving is generally an hereditary occupation, there is no special caste identified with the craft like that of the silver smiths, and this is held to show that the industry as it now exists is of comparatively modern origin. Its development in recent times is due to the desire of sightseers in India to have "something Indian" to take away with them in an easily portable form. But some of the best work is still of great beauty and fine workmanship. The carving of horns and shells may possibly be counted as variations of this art.

Statuary.

Part of that division of handicrafts which is vaguely connoted under the term "fine arts" is the subject of an article elsewhere in this book. Apart from painting, it is not a very considerable division. Statuary, except the wide-spread production of statuettes (in stone, wood, or cast metal) of mythological subjects, is little practised. Various brass workers are expert in reproducing in miniature scenes of Indian life and animals of the country, and at Lucknow some realistic terra cotta statuettes are produced. Wherever wood-carving is practised, and particularly in Burma, statuary in that material is turned out and is used chiefly for decorative purposes.

Fisheries.

The fisheries in Indian waters are unorganised in the modern sense of the term. Vast numbers of the coastal population are through natural circumstances engaged in fishing, but in a great proportion of cases this means of livelihood shares their time with agriculture. The Bengal Government took the important step, a few years ago, in connection with deep sea fishing, of introducing a steam trawler. The undertaking served the purpose of investigation but we have yet to see commercial development on a large scale. Special measures have also been taken by the Madras Government with more or less success, there being in this province a Fishery Department of Government under an Honorary Director. The inland fisheries where there are large rivers or tanks are often important in many parts of India.

Bengal & Bihar & Orissa.

The importance of the Bengal and Bihar and Orissa Fisheries—which are considered together, as they belong to the same geographical region—may be gauged from the fact that rice and fish are the principal foodstuffs of the population and that not less than 80 per cent. of the entire people consume fish as a regular article of diet. As a result, 1·6 per cent. of the population is engaged in catching, curing, and selling fish, a percentage which rises to 2·6 in the Presidency, Rajshahi and Dacca Divisions; moreover, large numbers of cultivators are returned as fishermen also. The waters of the Bay, the rivers, and swamps all contain fish, and every ditch and puddle furnishes small fry to eke out the frugal diet of the people. The best salt-water fish are the bekti, tapsi, or mango-fish, mullet, pomfret, and sole. Inland the hilsa (Clupea lisha) is found in shoals in the Ganges—it migrates up the rivers, from the sea, to spawn, exactly like English Salmon; while the rohu (Labeo rohita) and the katal (Catla buchanani) abound everywhere, as do also innumerable other varieties much esteemed by the Bengalis; prawns and crabs are caught in myriads. The mahseer is found in the higher reaches of the rivers which debouch from the Himalayas, and (according to some reports) in some of the rivers of the Chota Nagpur plateau.

The Bengali is a clever fisherman and the Uriyas and others fish along the foreshore of the Bay of Bengal, drying their catches ashore on stakes driven into some sandy beach. The larger rivers are usually fished by means of enormous nets. The tanks and ditches are periodically dragged, the fish at other times being angled or caught in a cast-net. Every streamlet is studded with hundreds of wicker fish-traps, while prawn cages are ubiquitous. The wonder is that any living fish escapes, so persistent and remorseless is the hunt for the finny tribe. Every other interest is subordinated to its pursuit, and not only is navigation impeded, but the drainage of the country is blocked by the obstruction of every channel and outlet.

Government probably do not own more than 10 per cent. of the entire fishery rights, which have generally been alienated to private persons, having been included in the "assets" on which the permanent settlement of estates was based, but in some cases the fishery itself is a separate "estate." In tanks the right of fishing vests in the owner or occupant who may be some public body on a private individual. In the Bay and in some portions of the Sunderbans fishing is free to all.

Altogether 644,000 persons in Bengal subsist by fishing, or double the number subsisting by pasture. Nor is this to be wondered at, considering the nature of the country and the resources, even though imperfectly developed of its rivers, its estuaries and the sea board. In addition, moreover, to those actively engaged in fishing, there are 324,000 maintained by the sale of fish, so that the total number supported by catching and selling fish is very little under 1 million, or 2 per cent. of the total population. Fishing is in Bengal not considered an honourable reputation, and the ambition of fishing castes is to attain greater respectability by becoming cultivators. As it is, one in every twelve of those whose principal occupation is fishing also cultivates some land in Bengal, and one in six in Bihar and Orissa.

One of the first to turn his attention to scientific study of the fisheries of the Bengal region was Russell, who came out to India (Vizagapatam) in 1781 and acted as Botanist in the Carnatic to the East India Company. A succession of investigators have continued his work and their reports showed that the fisheries offered great scope for profitable development. In particular may be mentioned the great additions to the knowledge of the deep sea fishes in the Bay of Bengal made by Colonel Alcock, I.M.S., Surgeon Naturalist to the Indian Marine Survey and, later, Superintendent of the Indian Museum in Calcutta. After extensive inquiries, he wrote that "the sea fisheries of the Bay of Bengal are of a value well nigh incalculable. That they are unknown, uncared for and unappreciated is unfortunately true; but it is equally true that they will prove a mine of wealth to whoever may have the enterprise to exploit them, and the tenacity of purpose to work them in the face of the apathy and incredulity that at present exists regarding them . . . . I may state that, as Naturalist to the Indian Marine Survey, I have carefully, and I think thoroughly, explored the Bay of Bengal from False Point in the Mahanadi Delta, to Devi Point on the Kistna Delta; and as these explorations have extended over four years, I have had ample opportunity of correcting and verifying all my earlier conclusions." After minutely describing the various kinds of fish available he concluded, "I can only repeat the opinions expressed at the outset that the fisheries of the Bay of Bengal are of inestimable value, and that whoever has enterprise enough to take them up and strength of purpose and length of means to stick to them, will reap a manifold return. The only special question for consideration is that of carriage from sea to market."

In 1906, the Government of Bengal placed Mr. K. G. Gupta, C.S.I., I.C.S. (now Sir K. G. Gupta), a Senior Member of their Board of Revenue, on special duty in order to inquire

into the same subject. He made a comprehensive and valuable report from which followed two important results—(1) His recommendation that a survey should be made of the fishery possibilities in the Bay of Bengal was immediately acted upon by Government and a typical steam trawler was set to work in the Bay under the direction of Dr. Travis Jenkins, of the Lancashire Sea Fisheries, who was specially engaged for the work; and (2) a Bengal Fishery Department was established. Dr. Jenkins also specially investigated the fishery possibilities of the Sunderbans.

The results obtained by Dr. Jenkins were of great importance. He showed that trawling could be carried on successfully throughout the year, and concluded that a properly organised scheme for developing the fisheries would yield a profitable return on capital invested. He indicated the lines on which these fisheries could be exploited.

While the sea fisheries of Bengal were thus investigated great industry was shown in the collection of information, in experimental work and in the initiation of breeding operations on scientific lines, in regard to the fresh water fisheries, in both rivers and tanks. The frequent overflowing of the great rivers in the rains and the necessity for studying the habits of the river fish added greatly to the work under this heading. The erection of weirs and the various irrigation schemes initiated in both provinces have also often wrought havoc with the fishery outlook.

The Fishery Department, after following up Dr. Jenkins' investigations, regard the Sunderbans fisheries as capable of furnishing yearly not far short of 200,000 maunds of fresh fish, while they point out that the area covered by the potential marine fisheries having been shown to be roughly 39,000 square miles, the supply from such a vast area must be well nigh inexhaustible. "From statistics which have been carefully compiled it has further been ascertained that the annual imports of fish to Calcutta from all sources roughly represent 30 per cent. of the actual requirements."

The future development of the fisheries on commercial lines will not only require some outlay of capital, but will also necessitate some advance in the general conditions and mental lot of the fishermen, because the low esteem in which the occupation of fishing and the dealing in fish is held has led to the whole industry being left in the hands of people with no capital, no education, no initiative and no business capacity. The most hopeful sign is officially stated to be the prospect of the spread of co-operative credit societies amongst fishermen in the near future. The situation is obviously one in which there is ample scope for a development of this kind. Meanwhile the Fisheries Department are carrying on persistent, careful and extensive propaganda work. As regards actual fishing, the Department are dividing their concentration on two points—(1) the possibility of increasing the actual number of fish present, and (2) the possibility of capturing a larger proportion of existing fish without exhausting the natural supply.

A problem at the present time is the absence of fishery laws in Bengal. The Fishery Department point out that as some legislation has been found necessary in every other civilised country, in order to protect both fish and the community against the rapacity of man, it may be assumed that sooner or later legislation will be found necessary in Bengal. "At present we know so little regarding the habits of the commoner marketable fish, that we have not sufficient data on which to formulate any extensive Fishery Laws. The results of the scientific enquiries . . . . will enable us first to determine whether legislation is necessary or not, and then to define the nature and object of any laws desired."

The Fishery Department was during last year separated from that of Agriculture and a separate Director of Fisheries has been appointed.

Burma.

The fisheries of Burma are important financially and otherwise. From time immemorial the exclusive right of fishing in certain classes of inland waters has belonged to the Government, and this right has been perpetuated in various fishery enactments, the latest of which is the Burma Fisheries Act of 1905. Fishing is also carried on along the coast, but the sea fisheries absorb but a small portion of industry. Most of the fishermen labour in the streams and pools, which abound particularly in the delta Districts. The right to work these fisheries, mentioned in the enactments alluded to above, is usually sold at auction, and productive inland waters of this kind often fetch very considerable sums. River fishing is largely carried on by means of nets, and generally yields revenue in the shape of licence fees for each net or other fishing implement used. Here and there along the coast are turtle banks which yield a profit to Government. In the extreme south the waters of the Mergui Archipelago afford a rich harvest of fish and prawns, mother-of-pearl shells and their substitutes, green snails and trochas, shark-fins, fish-maws, and beche-de-mer. Pearling with diving apparatus was introduced by Australians with Filipino and Japanese divers in 1893. They worked mainly for the shell, it being impossible for them to keep an effective check on the divers as regards the pearls. After about five years, when the yield of shell had decreased, they all left. The industry was then carried on by the Burmese.

Bombay.

The Bombay sea fisheries are important and give employment to numerous castes, chief of which are the Kolis. Pomfret, sole, stone, and lady-fish are sold fresh, while others, such as the bombil, are salted and dried. Large quantities of small fry are sold as manure. The palla, found in the Indus, and the maral and mahseer are the principal fresh-water fish.

Sea-fishing is carried on by the Muhana tribe of Musalmans, who reside for the most part in hamlets near Karachi. The principal fish caught on the coast are sharks, rays, and skates. The pearl oyster is found at several

places, and the Mirs conducted pearl operations on their own account. Under British rule, the right has been let for a small sum, but the pearls are very inferior in size and quality, so that the industry has greatly declined during the last thirty years. At present practically no pearl fishing is carried on. Considerable fisheries also exist in the river Indus, chiefly for the fish known as palla, which are annually leased out by Government for about Rs. 20,000.

But for a province with such a length of sea board and with the estuary of the Indus within its borders the fishing population is singularly small. The fishing boats and appliances generally are very small and the fishermen do not go out in rough weather. The best fishing season is the cold weather months of December, January and February, and it is probable that with such a very brief season the harvest of the sea is not sufficient to support a larger population. The fishing castes frequently desert their caste occupation for others, according to the 1911 census report. When the two groups, fishermen and fish dealers, are amalgamated there is a decrease of 9,000 in the aggregate, which can only be explained by their deserting their ancestral occupation.

The Government of Baroda, a State lying within the borders of the Bombay Presidency being desirous of introducing oyster culture into the coast districts of their State, have delegated a student to Pulicat, where the Madras Fisheries Department are engaged in similar work; and he is receiving practical instruction.

Madras.

The Madras irrigation tanks usually contain coarse fish, the right of netting which is disposed of annually. The sea-fisheries along the coast employ thousands of persons, and the salting of the catches is a very considerable industry. The development of the fisheries of the Presidency is now under investigation by Government. Fish-curing is carried on in special yards under Government supervision, and is an important industry.

Particulars obtained from the Madras Fishery Department show that the principal operations in hand during last year were as follows :—

(1) Tanur fish curing yard including curing, smoking, pickling (Salt and Vinegar), fish oil and guano, &c.;

(2) Cannery at Chaliyam (Beypore) with experiments in solar heating;

(3) Soap making at Calicut and Tanur;

(4) Sunkesula and Ippur fish farms;

(5) Larvicidal work;

(6) Stocking of tanks;

(7) Re-introduction of gourami;

(8) Nilgiri trout operations;

(9) Conservancy of various waters;

(10) Detailed examination of the waters of Coorg and South Kanara and of a variety of large tanks in the districts for conservancy purposes;

(11) Tuticorin marine fish farm;

(12) Edible oyster farm at Pulicat;

(13) Pearl oyster culture farm at Krusadai;

(14) Preparation of specimen for distribution and for educational work;

(15) Beche-de-mer cultivation;

(16) Research work;

(17) Chank work;

(18) Socio-economic work;

(19) Experimental deep sea fishing with Ratnagiri boats; and

(20) Miscellaneous, including tuition, bulletin writing, &c.

The West Coast Experimental Stations, *viz.*, the Tanur yard and Beypore Cannery, were run directly by Sir F. A. Nicholson, Hon. Director of Fisheries, with the co-operation of the Assistant Director, Mr. V. Govindan. The year was better than the preceding one, but not very favourable. Only small and lean sardines and unusually small mackerel were obtainable and large fish were scarce. The oil and guano manufactured at the yard continued to be of first class quality, though small in quantity, and there is now little difference between the skimmed and pressed oil. The guano on one occasion gave above 9·1 of nitrogen. The experiments in mackerel, pickled either plain with salt or with condiments, were developed and are successful as products. The Cannery also did better than in the previous year and over half a lakh of tins of various sizes were packed. The Henderson method of freezing fish was successfully operated. The two Ratnagiri boats bought in the previous year brought in considerable quantities of fish.

The inland fresh water fisheries were as usual under the supervision of the Pisciculture expert, the late Mr. H. C. Wilson. The chief operations were the Sunkesula fish farms with an addition known as the Pudur Scheme sanctioned during the year, the hilsa hatchery on the Coleroom, the stocking of an increased number of tanks, the starting of the Ippur Fish Farm (Nellore Dist.) mainly for larvicides and for the breeding of gourami and other valuable fish, the acclimatisation of tench, the breeding of fish, chief Etroplus and larvicides, in a series of ponds at the old Powder Factory, Madras, where gourami are also placed, the putting in hand of the Nallamalais Scheme for the growth of larvicides in view to combat local malaria and other antimalarial work, and the continuance of trout operations on the Nilgiris. A considerable area was brought under the restrictive operation of Section 6 of the Fisheries Act (IV of 1897). Mr. Wilson and his staff did a great deal of inspection and work not easily recorded. Mr. Wilson also visited Java and successfully brought back a consignment of gourami which are of great value.

The Pearl and Chank Fisheries and Marine Biological work were as usual under the immediate supervision of Mr. James Hornell, E.L.S. The chank work was carried on as in the previous year but with a larger net profit than has ever yet been attained from chanks. Nothing was received from pearls during the year, for not a pearl oyster was ever in sight. The lagoon fish farm at Tuticorin, the biological specimens sold to various colleges, the revived beche-de-mer industry all yielded substantial

profit, but the Pulicat Oyster Farm showed a small loss, because it is an experiment intended primarily to obtain pisciultural data and only secondarily to market the products. The plans and estimates for the projected Krusadai pearl oyster farm off Pamban were laid before Government, whose orders are awaited. Though costly (Rs. 50,500) at start, it should prove a most lucrative investment.

The socio-economic work was undertaken mainly by the Assistant Director, Mr. V. Govindan, B.A., F.Z.S. The formation of Co-operative Societies took up a good deal of the Assistant Director's time and energy, this work being of extraordinary difficulty among fisherfolk. Two societies were in existence at the beginning of the year on the West Coast and four more were started during the year, with preparation for several others, of which four have since been formed. The school attached to the Tenur yard had 30 boys on its rolls and earned a grant of Rs. 116 from Government. It is run by the yard staff, who also teach carpentry and smith work. The question of the extension of elementary education among the fisherfolk is now under consideration.

Soap operations were, as before, under Mr. A. K. Menon, B.A., F.C.S. During the year 12 tons of fish oil soaps and 32 tons of "Washwell" and 12 tons of "Vegetol" soaps, besides a small quantity of milled toilet soap, were made. More was not possible, as the Manager, Mr. Menon, was occupied in obtaining and fitting up the plant (of which the toilet soap plant was only received in October) experimenting, buying raw material, training the staff, getting business together, &c. The Vegetol soap has obtained a great vogue and is sold as fast as it can be made, owing to its composition, lathering qualities, &c. The milled toilet-soap is also growing in favour. Coal tar soap is much in demand owing to its purity, cheapness and disinfectant qualities. Considerable sales, with constant repeat orders, are being received, especially from the military authorities, Red Cross Associations and others. As the glycerine recovery plant ordered from England has not arrived, glycerine could not be recovered except to a small extent by makeshift arrangements, which, however, are under development.

The Indian Industrial Commission visited Calicut during the year and inspected the Cannery and Soap Works. An important proposal was made to Government by the department to take over all the Government fish-curing yards from the Salt Department and work them more or less after Tanur methods and the matter is still under the consideration of Government.

The Punjab.

A Punjab Fisheries Department came into being as an experimental measure in 1912, and received the official sanction of Government as a regular Department of the Punjab in April 1916. It operates under a Warden of Fisheries, Punjab, under control of the Financial Commissioner.

The first three years, under the Director of Fisheries, Punjab, the Department was almost entirely concerned with preliminary work, consisting largely of investigations and experiments in the Beas and Ravi Rivers. These Rivers were exploited with a view to ascertaining the indigenous species which inhabited them, their habits, spawning grounds and other data which would enable Government to frame regulations for their protection. The various fishing communities were interviewed and their views and statements carefully considered as to their rights in Government waters. From the mass of evidence collated the Director drafted rules for the Kangra District, which while conserving the fish supply and being a source of revenue to Government would be acceptable to the people of the District.

The rules came into force in July 1916 and appear to be working smoothly and satisfactorily.

Regulations on the same lines but based on local conditions have since been drafted for the following districts, and submitted to Government for approval.—Hoshiapur, Gurdaspur, Jullundar, Ludhiana and Amritsar. His Highness the Maharaja of Kapurthala having interested himself in matters pissicultural, in his State, rules were drafted to bring the Kapurthala State into line with the adjoining districts and submitted to the Durbar.

This will bring the whole of the Beas up to its confluence with the Sutlej River, and a portion of the latter under the Fisheries Regulations and should go far to preserve the existing head of fish in these rivers.

Trout operations in Kulu continue to flourish and now that the head of fish in the upper reaches of the Beas River are well established, endeavours will be made to extend trout culture into other Himalayan streams. 30,000,000 were planted in the Mandi State and practically all hatched out and there is no reason why they should not be the nucleus of fine sport and good revenues to that state in the near future.

Several angling licenses were issued and good sport obtained in the Kulu Valley—The largest trout captured being lbs. 4

The Opium Trade.

Two descriptions of opium must be distinguished. *Bengal* opium which is manufactured from poppy grown in the United Provinces; and *Malwa* opium which is almost entirely produced in certain Native States in Central India and Rajputana.

Bengal Opium.—Cultivation of poppy is only permitted under license. The cultivator to whom advances are made by Government free of interest is required to sell the whole of his production to the Opium Factory at Ghazipur at a rate fixed by Government, now Rs. 7/8 per seer of 70° consistency. The area licensed for cultivation has in recent years been much reduced as a consequence of the agreement between the Government of India and the Chinese Government, and is now restricted to the United Provinces. The following are the figures of the area under cultivation and of production :—

—	*Average under cultivation.*	*Maunds of opium produced.*	*Number of chests made.*
1911–12	200,672	31,473	23,126
1910–11	362,868	44,926	33,611
1909–10	354,577	47,666	36,172
1908– 9	361,832	61,803	33,895
1907– 8	488,548	71,340	51,230

At the Factory two classes of opium are manufactured :

(1) "Provision" opium intended for export to foreign countries. This opium is made up in balls or cakes, each weighing 3·5 lbs., 70 cakes weighing 140½ lbs. being packed in a chest.

(2) "Excise" opium intended for consumption in British India. This is made up in cubic packets, each weighing one seer, 60 packets being packed in one chest. It is of higher consistency than "provision" opium.

"Provision" opium is sold by public auction in Calcutta, the quantity to be sold being fixed by Government. This quantity has been reduced in recent years in accordance with the agreement with China, the figures being 15,440 chests in 1911 and 6,700 chests in 1912. Exports to China have been stopped altogether since 1913.

Statistics of Trade.

The difference between the cost of manufacture and the price realised at these sales may be regarded as the duty levied by Government :—

—	*Number of chests sold.*	*Average price realised at auction sales per chest.*	*Average cost of manufacture per chest.*
			Rs.
1911–12	26,330	2,790	*
1910–11	37,560	2,890	525
1909–10	42,300	1,612	515
1908– 9	45,900	1,383	525
1907– 8	48,900	1,350	503

Malwa Opium.—The poppy from which Malwa opium is manufactured is grown chiefly in the Native States of Indore, Gwalior, Bhopal, Jaora, Dhar, Rutlam, Mewar and Kotah. The British Government has no concern with the cultivation of the poppy, or the manufacture of the opium: but it used to regulate, before exports to China were stopped, under the system explained below, the import of Malwa opium into, and the transport through, its territories. As the chief market for Malwa opium was China, and as the States in which the drug is produced had no access to the sea, except through British territory, the British Government were able to impose a duty on the importation of the drug on its way to Bombay for exportation by sea.

No statistics of cultivation or production are available. The poppy is sown in November, the plants flower in February, and by the end of March the whole of the opium has been collected by the cultivators who sell the raw opium to the village bankers. It is then bought up by the large dealers who make it up into balls of about twelve ounces and store it until it is ready for export, usually in September or October. The opium is of 90° to 95° consistency and is packed in half chests: considerable dryage took place in the case of new opium while transported to Bombay.

To enable Malwa opium to reach Bombay a pass from the Opium Agent, or his Deputies, was required. This pass was not granted until the duty imposed by the Government of India had been paid. This duty was until 1912 at the rate of Rs. 600 per chest: but was raised to Rs. 1,200 in that year consequent on the introduction of a system similar to that applicable to Bengal opium. Under this system the Collector of Customs, Bombay, sold the right of exporting opium to the highest bidder at monthly auction sales. On payment of the price bid and of duty at the enhanced rate the bidder was given a certificate authorising him to import opium from Malwa. The number of chests fixed for export in the year 1913 was 14,860. But out of these only 2,755 were exported during the year owing to the large accumulation of stocks in China markets. Sales of Malwa opium for export to that country have ceased since January 1913 and the trade has become extinct since 17th December of that year when the last shipment was made.

Practically the whole of the Malwa opium exported from Bombay went to China. There is no market for it in the Straits Settlements. A few chests annually are shipped to Zanzibar.

Revenue—The revenue derived by the Government of India from opium in recent years is as follows :—

	£
1911–12	5,961,278
1912–13	5,124,502
1913–14	1,624,878
1914–15	912,793
1915–16	1,913,514
1916–17 (Revised Estimate) ..	3,153,100
1917–18 (Budget Estimate) ..	3,389,300

* Figures not available.

Agreement with China.—The fluctuations in the revenue derived from opium are directly attributable to the trade conditions arising out of the limitation of opium exports. In 1907 being satisfied of the genuineness of the efforts of the Chinese Government to suppress the habit of consuming opium in China, the Government of India agreed to co-operate by gradually restricting the amount of opium exported from India to China. In 1908 an arrangement was concluded by which the total quantity of opium exported from India was to be reduced annually by 5,100 chests from an assumed standard of 67,000 chests. Under a further agreement, signed in May 1911, the cessation of the trade was to be accelerated on evidence being shown of the suppression of the native production of opium in China, and in accordance with this agreement a further limitation was placed on exports to Chinese ports. The reduction of exports led to an increase in the price of the drug in China and a corresponding rise in the price obtained in India at the auction sales. For some considerable time, however, in 1912 the trade in China was paralysed by the imposition by Provincial Governors in defiance of instructions from the Central Government of restrictions on the importation and sale of Indian opium. Stocks accumulated rapidly at Shanghai and Hongkong and the position in December 1912 had become so acute that a strong and influential demand was made on the Government of India to relieve the situation by the suspension of sales. Sales were accordingly postponed both of Bengal and Malwa opium and in order to afford the Malwa trade the most complete relief, the Government of India undertook to purchase for its own use 11,253 chests of Malwa opium which remained to be exported in 1913. The present position is that the export trade to China has ceased since 1913. The exports of opium on private account amounted in 1916-17 to 8,710 chests or 12,760 cwts., the lowest exports recorded. Indo-China (including Cochin-China) took 3,440 chests, Java, 1,965 chests, and Siam, 1,200 chests. The other principal importing countries in order of importance were Japan, Hongkong, the Straits Settlements, Formosa, Mauritius, Ceylon, and Macao. The exports on Government account which are not included in the above figures were 8,225 chests from Bombay, and 4,115 chests from Bengal. These exports were to the United Kingdom, Hongkong and the Straits Settlements.

GLASS AND GLASSWARE.

The total value of glass and glassware imported into India in 1916-17 was Rs. 150 lakhs, compared with Rs. 106 lakhs in the preceding year, and Rs. 161 lakhs, the annual average of five years up to 1913-14. Austria-Hungary and Germany, before the outbreak of war, exported bangles, beads, bottles, funnels, globes, etc., to the value of Rs. 116 lakhs in 1913-14. The value of the average imports from the enemy countries during the five pre-war years was Rs. 98 lakhs or about 57 per cent of the trade. With their disappearance from the Indian market, imports from Japan have increased more than six times from Rs. 14 lakhs the pre-war average to Rs. 90 lakhs, in 1916-17. The United Kingdom increased her shipments of sheet and plate glass, which before 1914 came largely from Belgium.

Glass manufacture in India consists of two well-defined classes, the indigenous household industry and the modern factory industry. The indigenous household industry, which is represented in all parts of the country, is chiefly concerned with the manufacture of cheap bangles. Glass manufacture in India on the modern factory system has hitherto been an uphill struggle against great difficulties. In Bengal, the Pioneer Glass Manufacturing Company, Limited, of Titagarh, started work in 1890 and the Bengal Glass Company of Sodepur in 1898. They ceased working in 1899 and 1902, respectively. The Madras Glass Works founded in 1909 has ceased work, though it is hoped to restart it. A factory started in Hyderabad also proved a failure and its plant was taken over by the Glass Works at Ambala. The Himalayan Glass Works at Rajpur in the Dehra Dun district closed after three or four years' working in 1908, but was restarted later under new management. Finally, the Upper India Glass Works at Ambala, which was started by Indian capitalists in 1895, was at first a failure. Since 1903, however, it has been much more successful. It established itself firmly in its earlier years by specialising in the manufacture of bangle glass; and in this line it is interesting to record that the bangle glass of Ambala and Firozabad has succeeded in capturing the market, whereas formerly large quantities of glass used to be imported from Belgium for this purpose.

During the past year or two, a number of Glass Works have been opened in the Bombay Presidency and adjoining districts, local manufacture having been stimulated by the cessation of imports of German, Austrian and Belgian Glass. In Bombay City itself there are three factories, the Bombay Glass Manufacturing Company, the Indian Glass Manufacturing Company, Ebrahim Peer Mahomed and Company (Glass Manufacturers), and elsewhere in the Presidency other important Works include the Western India Glass Works, Sunth Road; the Swadeshi Glass Manufacturing Company, Limited, Piplod; the Baroda Glass Works, Baroda; the Paisa Fund Glass Works, Talegaon; the Ogale Glass Works, Karad. In addition, the Kotah State has erected a factory at Baran for the production of glass for Bangles. Jubbulpore also has an important Glass Factory.

Records of the earlier ventures have shown that the failures in some cases were due, in part at least to preventible causes, prominent among which were (1) the lack of sufficient fluid capital and the consequence inability of the companies to meet their heavy initial expenses

and (2) inexperience and lack of technical knowledge on the part of promoters. But there are also certain real and special difficulties which glass manufacturers in India have to contend against.

The principal present difficulties are :—

(1) The difficulty of obtaining skilled labour for glass blowing. This difficulty should be overcome in course of time, as there are now a few experienced Indian Blowers. (2) The heavy cost of fuel, the works usually being situated where good sand and quartz can be obtained, and consequently, in most cases at a great distance from the coal fields. (3) Competition from Japan.

The Alkali used is almost entirely of English manufacture, being Carbonate of Soda 98–99% in a powdered form. This Alkali has almost completely taken the place of the various Alkaline Earths formerly employed by the Glass Bangle manufacturers, as the latter cannot be used in the manufacture of glass which is to compete with the imported article.

WILD BIRDS' PLUMAGE.

The Bill for prohibiting the importation into England of wild birds' plumage, which was introduced into Parliament in 1913, was the occasion of a fierce controversy on the nature of the plumage traffic. But organised opposition to the Bill failed to convince the public that the plumage trade was not one of great cruelty. Among well-authenticated cases from India that prove its cruelty was one from Karachi, in 1913, in which two men were fined for sewing up the eyes of birds so that they should not fight in their cages. It was stated that this was a common practice of fishermen in Sind, who breed birds and export their feathers to England. This according to *The Times*, is not only another apparent example of the way in which the prohibition on the export of plumage from India is notoriously evaded by smuggling into the open market of England, but shows how easily abuses might arise under any system which gave a general sanction to feather-farming. All legitimate methods of breeding birds for their plumage can be safeguarded as definite exceptions under an Act prohibiting importation; and only the exclusion by law of all plumage not so specified can put England abreast of the United States and of her own daughter Dominions in the suppression of a barbarous industry.

Plumage birds.—The birds most killed on account of their plumage in India are paddy birds, kingfishers, bustards, junglefowl, egrets, pheasants, paroquets, peafowl, and hoopoes. Perhaps the most extensively killed in the past has been the Blue Jay (Coracias Indica). The smaller Egret is met with throughout India and Northern Burma. It is a pure white slim heron which develops during the breeding season a dorsal train of feathers, which elongates and becomes "decomposed" as it is expressed, that is to say, the barbs are separate and distinct from each other, thus forming the ornamental plume or aigrette for which these birds are much sought after and ruthlessly destroyed. Thirty years ago the exports were valued at over six lakhs in one year, but since 1895 the export trade has steadily diminished. But, though legitimate exports have been stopped, the trade is so lucrative as to lead to many attempts at smuggling. Within a recent period of 12 months the Bombay Preventive Department, for example, seized egret plumes worth Rs. 2,19,047 in India and £44,000 in London. The rupee value represents the sum which the exporters paid to those who took the feathers from the birds, so the loss to the trade was considerable. In addition, penalties varying from Rs. 5,000 to Rs. 10,000 each and amounting altogether to Rs. 59,175 were inflicted on the ten merchants concerned in attempting to export the feathers. A case was reported from Rangoon in 1916 of a man being found in possession of 22 lbs. of egret feathers valued at Rs. 66,000.

Legislation.—Indian legislation on the subject will be studied with interest by those who have followed the course of legislation on this subject in other countries. Until 1887 no legislation was considered necessary in India. An Act of that year enabled local governments and municipal and cantonment authorities to make rules prohibiting under penalties the sale or possession of wild birds recently killed or taken during their breeding seasons, and the importation into any municipal or cantonment area of the plumage of any wild birds during those seasons; and local governments were empowered to apply these provisions to animals other than birds.

Afterwards, in 1902, action was taken under the Sea Customs Act to prohibit the exportation of the skins and feathers of birds, except feathers of ostriches and skins and feathers exported *bona fide* as specimens illustrative of natural history. Act VIII of 1912 goes much further than the previous law. It schedules a list of wild birds and animals to which the Act is to apply in the first instance, enables local governments to extend this list, empowers local governments to establish "close times," presumably during the breeding seasons, in the whole of their territories or in specified areas, for wild birds and animals to which the Act applies, and imposes penalties for the capture, sale, and purchase of birds and animals in contravention of the "close time" regulations, and for the sale, purchase and possession of plumage taken from birds during the close time. There is power to grant exemptions in the interests of scientific research, and there are savings for the capture or killing by any person of a wild animal in defence of himself or of any other person, and for the capture or killing of any wild bird or animal in *bona fide* defence of property.

One defect in the law may be noticed. When an exporter is discovered, the Customs Department can on a magistrate's warrant have his house searched and seize the feathers found there to produce as evidence that he is engaged in the trade. But they have to return the feathers and can only take possession of them if they are discovered presently in course export.

BREWERIES.

Statistics compiled from official returns show that there were, in 1912, 22 **breweries** in British India, of which one did not work during the year. Fifteen of these are private property and seven are owned by six joint-stock companies with a nominal capital of Rs. 26,71,000, of which Rs. 22,26,260 was paid up at the end of 1912-13. Eight of the breweries are located at stations in the Himalayas from Murree to Darjeeling. The largest brewery is the one at Murree, the Bangalore, Solon, Rawalpindi, Kasauli, Poona, and Mandalay, breweries standing next in the order shown. **Production** was largest in 1902, since when it has tended to decline. In 1916-17 the production was 4,103,000 gallons, an increase of 62 per cent. as compared with that of the previous year.

A substantial quantity of beer produced locally is consumed by the British troops in India. In 1907 the Army Commissariat purchased some 38 per cent. of the total production and the average purchases in the five years 1903-1907 amounted to 2,633,616 gallons yearly. From the 1st January, 1908, the contracts with Indian breweries for the supply of malt liquor to British troops have been discontinued, each British regiment being left free to make its own arrangements to obtain the necessary supply; as a result, the figures of Army consumption are no longer readily available.

GRAIN ELEVATORS.

The question of adopting elevators for the handling of Indian grain has engaged attention for some time and has assumed increased importance in the light of the railway congestion experienced in recent years and more particularly in the grain season. In the last three years great strides have been made by other countries in the adoption or perfecting of the elevator system, and a large mass of contemporary data on the subject has been brought together by the Commercial Intelligence Department. Since the subject is one that cannot receive adequate consideration in India till the facts are before the public, these have been embodied in a pamphlet entitled *Indian Wheat and Grain Elevators*, by the late Mr. F. Noel-Paton, Director General of Commercial Intelligence to the Government of India. The work gives full particulars regarding India's production of wheat, and shows that less than one-eighth of the crop is exported. It describes the conditions under which the grain is held and the risks that it runs. It is pointed out that the cultivator has no adequate means of preserving his wheat and that he is constrained to sell at harvest time: also that the prices then obtained by him are considerably lower than those usually current in later months. The constant nature of the European demand is explained and an attempt is made to gauge the probability that the enormously increased quantities of wheat to be expected when new irrigation tracts come into bearing would be accepted by Europe at one time and at a good price, or could be economically transported under a system in which a few months of congestion alternated with a longer period of stagnation. Figures are given which suggest that in practice the effect of equipping railways to do this is to intensify the evil and so to engage in a vicious circle. The author explains the structural nature of elevators and their functions as constituted in other countries. Particulars are given as to the laws that govern their operations in such countries.

TRADE MARKS.

The **Indian Merchandise Marks Act** (IV of 1889) was passed in 1889, but its operation in the earlier years was restricted, especially in Calcutta, in consequence of the lack of adequate Customs machinery for the examination of goods. In 1894, with the introduction of the present tariff, the Customs staff was strengthened for the examination of goods for assessment to duty, and this increase enabled examination to be made at the same time for the purposes of the Merchandise Marks Act. The Act was intended originally to prevent the fraudulent sale of goods bearing false trade marks or false trade descriptions (as of origin, quality, weight, or quantity). While the Act was before the Legislature a provision was added to require that all piece-goods should be stamped with their length in yards. In this respect these goods are an exception, for the Act does not require that other descriptions of goods should be stamped or marked, though it requires that when goods are marked the marks must be a correct description. **The number of detentions** under the Act during the twenty years ending 1912-13 has been :—

Average of the five years ending	1897-98 1,386
" " " " " ..	1902-03 1,411
" " " " " ..	1907-08 1,198
" " " " " ..	1912-13 1,960

Detention is but rarely followed by confiscation, and there have been only 109 such cases during the stated twenty years. Usually, detained goods are released with a fine, and this procedure was followed in 19,282 cases out of the 29,774 detentions ordered in the same period. In 10,364 cases the detained goods were released without the infliction of a fine. In this period of twenty years 42 per cent. of the detentions were on account of the application of false trade marks or false trade descriptions. In 36 per cent. of the cases detention was ordered because the country of origin was either not stated or was falsely stated, and in 21 per cent. because the provisions of the Act for the stamping of piece-goods had been infringed.

HIDES, SKINS AND LEATHER.

India's local manufactures of skins and leather have steadily increased in recent years. Previous to the outbreak of war, the trade in raw hides in this country was good; there was a large demand for hides, and prices ruled high. While in the continental markets stocks were high owing to overtrading in the previous year, the United States had a shortage which was estimated at approximately two million pieces. On the declaration of war, the trade which had up till then been brisk was seriously dislocated. Exports to enemy countries, especially to the great emporium of Indian hides, Hamburg, were stopped, and exporters had to find new markets for the raw material. The raw hide business of India, it is well known, has hitherto been largely, if not quite entirely, in the hands of German firms or firms of German origin. Germany has had the largest share of India's raw hides. In the four months before the outbreak of war she took 39 per cent. of the total exports. In 1912-13 she took 32 per cent. and in 1913-14, 35 per cent. Raw hides were exported to Trieste in considerable quantities whence they were taken to Germany or Austria. In the four months before the outbreak of war 15 per cent. of India's exports passed through Trieste; in 1913-14 the percentage was 21.

The main features of the trade in 1916-17 were the large increase in **total exports**, the record exports of leather, and the large quantities of raw and tanned hides and skins sent to the United States. The exports were :—

Average of five years.	Raw hides and skins including cuttings.	Tanned hides and skins.	Unwrought and manufactured leather.	Total.
	Rs.	Rs.	Rs.	Rs.
1909-10 to 1913-14	10,31,60,000	4,27,45,000	2,14,000	14,61,19,000
Year 1915-16	9,79,53,000	5,61,11,000	2,70,000	15,43,34,000
„ 1916-17	14,40,86,000	9,31,78,000	12,20,000	23,84,84,000

Raw hides and skins, it will be seen, were valued at Rs. 14,41 lakhs or 60 per cent. of the total exports. Prices ruled high, and the increase of Rs. 4,62 lakhs in the year under review was accounted for by an increase of Rs. 3,60 lakhs on account of higher prices, and of Rs. 1,02 lakhs on account of a greater volume of trade. Exports to the United States have, since the closing of the Central European markets, greatly increased. In the pre-war year Germany purchased 48 per cent. and Austria-Hungary 19 per cent. of the exports of cow hides. The place of these countries has now been partially taken by the United States which in the year under review took nearly 36 per cent. of the raw cow hides exported.

In **tanned hides and skins** there was an increase of Rs. 2,43 lakhs due to higher prices, and Rs. 1,28 lakhs due to an increase in the volume of trade. Ninety-nine per cent. of the export of tanned hides went to the United Kingdom which nearly doubled its imports from India as compared with the pre-war average. The total shipments increased by 18 per cent. as compared with 1915-16, and by 76 per cent. as compared with the pre-war average. Nearly one-tenth of the tanned hides were cow hides, the shipments of which increased in the year to 14,000 tons, valued at Rs. 4,03 lakhs, from 12,000 tons, valued at Rs. 2,84 lakhs, in 1915-16. The exports on Government account (which are included in the figures just quoted) were 7,000 tons valued at Rs. 1,91 lakhs. Of tanned skins the United Kingdom and the United States were the main buyers. The quantity exported to the United Kingdom was nearly the same as in the pre-war quinquennium, *viz.*, 5,400 tons, while that to the United States rose from 800 tons to 2,300 tons. Tanned goat skins were exported to the extent of 4,200 tons. The exports of tanned sheep skins were 3,300 tons.

The trade in hides and skins and the craft in leather manufacture are in the hands either of Mahomedans or of low caste Hindus, and are on that account participated in by a comparatively small community. The traffic is subject to considerable fluctuations concomitant with the vicissitudes of the seasons. In famine years for instance the exports of untanned hides rise to an abnormal figure. The traffic is also peculiarly affected by the difficulty of obtaining capital and by the religious objection which assigns it to a position of degradation and neglect: it has thus become a monopoly within a restricted community and suffers from the loss of competition and popular interest and favour.

No large industry has changed more rapidly and completely than that of leather. By the **chrome process**, for example, superior leather may be produced from the strongest buffalo hides in seven days, from cowhide in twenty-four hours, and from sheep and goat skins in six to eight hours; and these operations formerly took thirty days or as much as eighteen months. Of these changes the native tanners of India were slow to take advantage, but in spite of general backwardness the leather produced by some of the tanneries, especially those under European management, is in certain respects equal to the best imported articles. But as a result of India being slow

to adopt up-to-date methods, there has been a decline in the demand for Indian dressed skins, while the demand for raw skins has increased considerably. The chief tanneries are situated at Cawnpore, Calcutta and Bombay. Efforts are being made to remedy the wastage caused by defective methods of killing and flaying animals.

Indigenous methods.—India possesses a large selection of excellent tanning materials such as Acacia pods and bark, Indian sumach, the Tanner's cassia, Mangroves, and Myrabolans. By these and such like materials and by various methods and contrivances, hides and skins are extensively cured and tanned and the leather worked up in response to an immense, though purely local, demand. But the inferior quality of the leather so used by effect methods may be illustrated by the fact that the articles produced rarely fetch much more than one-fourth the value of the corresponding articles made of imported or Cawnpore (European factory) leather.

INVENTIONS AND DESIGNS.

A handbook to the **Patent Office** in India, which was published in 1916 by the Government Press, Calcutta, gives the various Acts, rules, and instructions bearing on the subject together with hints for the preparation of specifications and drawings, hints for searchers and other valuable information that has not hitherto been readily accessible to the general public in so convenient a form. In the preface Mr. H. G. Graves, Controller of Patents and Designs, explains the scope of the Patent laws in India and indicates wherein they differ from English law and procedure.

The foundation of patent legislation throughout the world lies in the English "Statute of Monopolies" which was enacted in 1623, the 21st year of King James the First. In part this Act has been repealed but the extant portion of the more important section 6 is as follows:—"Provided also that any declaration before mentioned shall not extend to any letters patent and grants of privilege for the term of fourteen years or under, hereafter to be made of the sole working or making of any manner of new manufactures within this realm to the true and first inventor and inventors of such manufactures, which others at the time of making of such letters patent and grants shall not use, so as also they be not contrary to the law nor mischievous to the State by raising prices of commodities at home, or hurt of trade, or generally inconvenient; the said fourteen years to be accomplished from the date of the first letters patent or grants of such privilege hereafter to be made, but that the same shall be of such force as they should be if this Act had never been made, and of none other."

The **existing Indian patent law** is contained in the Indian Patents and Designs Act, 1911, supplemented by the Indian Patents and Designs (Temporary Rules) Act, 1915, and by the Rules made under those Acts. The Patent Office does not deal with trade marks or with copyright generally in books, pictures, music and other matters which fall under the Indian Copyright Act III of 1914. There is, in fact, no provision of law in British India for the registration of Trade Marks which are protected under the Merchandise Marks Act (IV of 1889) which forms Chapter XVIII of the Indian Penal Code.

On the whole, Indian law and procedure closely follow that in the United Kingdom for the protection of inventions and the registration of designs, as they always have done in matters of major interest. One main difference exists, however, as owing to the absence of provision of law for the **registration of trade marks**, India cannot become a party to the International Convention under which certain rights of priority are obtainable in other countries.

The first Indian Act for granting exclusive privileges to inventors was passed in 1856, after an agitation that had been carried on fitfully for some twenty years. Difficulties arising from an uncertainty as to the effect of the Royal Prerogative prevented earlier action, and, owing to some informalities the Act itself was repealed in the following year. In 1859 it was re-enacted with modifications, and in 1872 the Patterns and Designs Protection Act was passed. The protection of Inventions Act of 1883, dealing with exhibitions, followed, and then the Inventions and Designs Act of 1888. All these are now replaced by the present Act of 1911.

The existing Acts extend to the whole of British India, including British Baluchistan and the Santhal Parganas. This of course includes Burma but it does not embrace the Native States. Of the latter three, *viz.*, (1) Hyderabad (Deccan), (2) Mysore, (3) Gwalior have ordinances of their own, for which particulars must be obtained from the Government of the States in question as they are not administered by the Indian Patent Office in Calcutta. The object of the Act of 1911 was to provide a simpler, more direct, and more effective procedure in regard both to the grant of patent rights and to their subsequent existence and operation. The changes made in the law need not here be referred to in detail. They gave further protection both to the inventor, by providing that his application should be kept secret until acceptance, and to the public, by increasing the facilities for opposition at an effective period. At the same time a Controller of Patents and Designs was established, with power to dispose of many matters previously referred to the Governor-General in Council, and provision was made for the grant of a sealed "patent" instead of for the mere recognition of an "exclusive privilege." The provisions of the Act follow with the necessary modifications those of the British Inventions and Designs Act of 1907.

The **annual report** of the Indian Patents' Office for the calendar year 1916 states that four hundred and forty-two applications for patents and 1,773 applications to register designs were made in 1916 as compared with 445 and 904 respectively in 1915. The income of the office increased from Rs. 69,760-3 in 1915 to Rs. 77,608-13 in 1916. Figures for

previous years are published in the Report. Mr. Graves, the Comptroller, remarks that if the natural increase of pre-war conditions had been continued, there would have been about 800 applications for patents and an income of over Rs. 80,000. Apart from the falling-off in applications, the war does not appear to have made any material change in the nature of inventions in this country where the novel necessities of the moment are not apparent and cannot therefore be supplied by would-be patentees. Altogether 2,649 patents were in force on 31st December 1916. These include 1,814 patents out of 2,108 sealed on 2,858 applications under the Indian Patents and Designs Act, 1911, together with 65 of the 148 patents converted under section 81 of that Act. The balance 770 consists of exclusive privileges remaining under the Inventions and Designs Act 1888.

Applications for **patent by enemy subject** are permitted, but as a rule are held in suspense and the sealing of patents on their applications is not affected for the present. Patents in existence are, however, renewable at the option of the holder even if he be an enemy as it is not considered desirable that the property therein should be destroyed. It can, however, be alienated or utilised for the benefit of the public on application. Provision for these proceedings is made by a License Act, and rules introduced after the year. In their main lines the License Act and rules follow the practice in the United Kingdom. They enable the controller to deal with patents held by enemy subjects and remove the disabilities under which any person may suffer in respect of patents or designs owing to the present state of the war.

Printed Specification of applications for patents, which have been accepted (8 annas per copy), may be seen free of charge, together with other publications of the Patent Office at the following places:—

AHMEDABAD	R. C. Technical Institute.
ALLAHABAD	Public Library.
BANGALORE	Indian Institute of Science.
BOMBAY	Record Office.
"	Victoria Jubilee Technical Institute, Byculla.
"	The Bombay Textile and Engineering Association, No. 1A, Sussex Road, Parel.
CALCUTTA	Patent Office, No. 1, Council House Street.
"	Civil Engineering College, Sibpur.
CAWNPORE	Office of the Director of Industries, United Provinces.
CHINSURAH	Office of the Commissioner, Burdwan Division.
CHITTAGONG	Office of the Commissioner, Chittagong Division.
DACCA	Office of the District Board, Dacca.
DELHI	Office of the Deputy Commissioner.
HYDERABAD	Revenue Department of His Highness the Nizam's Government.
JALPAIGURI	Office of the Commissioner, Rajshahi Division.
KARACHI	Office of the City Deputy Collector.
LAHORE	Punjab Public Library
LONDON	The Patent Office, 25, Southampton Buildings, W. C.
MADRAS	Record Office, Egmore.
"	College of Engineering.
MYSORE	Office of the Secretary to Government, General and Revenue Department.
NAGPUR	Victoria Technical Institute.
POONA	College of Engineering.
RANGOON	Office of the Revenue Secretary, Government of Burma.
ROORKEE	Thomas College.
SHOLAPUR	Office of the Collector.

COPYRIGHT.

There is no provision of law in British India for the registration of Copyright. Protection for Copyright accrues under the Indian Copyright Act under which there is now no registration of rights but the printer has to supply copies of these work as stated in that Act and in the Printing Presses and Books, Act XXV of 1867. The Indian Copyright Act made such modifications in the Imperial Copyright Act of 1911 as appeared to be desirable for adapting its provisions to the circumstances of India. The Imperial Act of 1911 was brought into force in India by proclamation in the *Gazette of India* on October 30, 1912. Under s 27 of that Act there is limited power for the legislature of British possessions to modify or add to the provisions of the Act in its application to the possession, and it is under this power that the Indian Act of 1914 was passed. The portions of the Imperial Act applicable to British are scheduled to the Indian Act. The Act to which these provisions are scheduled makes some formal adaptations of them to Indian law and procedure, and some material modifications of them in their application to translations and musical compositions. In the case of works first published in British India the sole right to produce, reproduce, perform or publish a translation is, subject to an important proviso, to subsist only for ten years from the first publication of the work. The provisions of the Act as to mechanical instruments for producing musical sounds were found unsuitable to Indian conditions. "The majority of Indian melodies" it was explained in Council, "have not been published, *i.e.*, written in staff notation, except through the medium of the phonograph. It is possible in many cases to identify the original composer or author, and the melodies are subject to great variety of notation and tune. To meet these conditions s. 5 of the Indian Act follows the English Musical Copyright Act of 1902 by defining **musical work** as meaning any combination of melody and harmony, or either of them, printed, reduced to writing, or otherwise graphically produced or reproduced."

Coinage, Weights and Measures.

As the currency of India is based upon the rupee, statements with regard to money are generally expressed in rupees, nor has it been found possible in all cases to add a conversion into sterling. Down to about 1873 the gold value of the rupee (containing 165 grains of pure silver) was approximately equal to 2s., or one-tenth of a £, and for that period it is easy to convert rupees into sterling by striking off the final cipher (Rs. 1,000=£100). But after 1873, owing to the depreciation of silver as compared with gold throughout the world, there came a serious and progressive fall in the exchange, until at one time the gold value of the rupee dropped as low as 1s. In order to provide a remedy for the heavy loss caused to the Government of India in respect of its gold payments to be made in England, and also to relieve foreign trade and finance from the inconvenience due to constant and unforeseen fluctuations in exchange, it was resolved in 1893 to close the mints to the free coinage of silver, and thus force up the value of the rupee by restricting the circulation. The intention was to raise the exchange value of the rupee to 1s. 4d., and then introduce a gold standard at the rate of Rs. 15=£1. From 1899 onwards the value of the rupee has been maintained, with insignificant fluctuations, at the proposed rate of 1s. 4d., and consequently since that date three rupees have been equivalent to two rupees before 1873. For the intermediate period, between 1873 and 1899, it is manifestly impossible to adopt any fixed sterling value for a constantly changing rupee. But since 1899, if it is desired to convert rupees into sterling, not only must the final cipher be struck off (as before 1873), but also one-third must be subtracted from the result. Thus Rs. 1,000=£100—⅓=(about) £67.

Notation.—Another matter in connection with the expression of money statements in terms of rupees requires to be explained. The method of numerical notation in India differs from that which prevails throughout Europe. Large numbers are not punctuated in hundreds of thousands and millions, but in lakhs and crores. A **lakh** is one hundred thousand (written out as 1,00,000), and a **crore** is one hundred lakh or ten millions (written out as 1,00,00,000). Consequently, according to the exchange value of the rupee, a lakh of rupees (Rs. 1,00,000) may be read as the equivalent of £10,000 before 1873, and as the equivalent of (about) £6,667 after 1899, while a crore of rupees (Rs. 1,00,00,000) may similarly be read as the equivalent of £1,000,000 before 1873, and as the equivalent of (about) £666,667 after 1899.

Coinage.—Finally, it should be mentioned that the rupee is divided into 16 annas, a fraction commonly used for many purposes by both Natives and Europeans. The anna was formerly reckoned as 1½d., it may now be considered as exactly corresponding to 1d. The anna is again sub-divided into 12 pies.

Weights.—The various systems of weights used in India combine uniformity of scale with immense variations in the weight of units. The scale used generally throughout Northern India, and less commonly in Madras and Bombay, may be thus expressed one maund 40 seers, one seer=16 chittaks or 80 tolas. The actual weight of a seer varies greatly from District to District, and even from village to village, but in the standard system the tola is 180 grains Troy (the exact weight of the rupee), and the seer thus weighs 2·057 lb., and the maund 82·28 lb. The standard is used in official reports.

Retail.—For calculating retail prices, the universal custom in India is to express them in terms of seers to the rupee. Thus, when prices change what varies is not the amount of money to be paid for the same quantity, but the quantity to be obtained for the same amount of money. In other words, prices in India are quantity prices, not money prices. When the figure of quantity goes up, this of course means that the price has gone down, which is at first sight perplexing to an English reader. It may, however, be mentioned that quantity prices are not altogether unknown in England, especially at small shops, where pennyworths of many groceries can be bought. Eggs, likewise, are commonly sold at a varying number for the shilling. If it be desired to convert quantity prices from Indian into English denominations without having recourse to money prices (which would often be misleading), the following scale may be adopted—based upon the assumption that a seer is exactly 2 lb., and that the value of the rupee remains constant at 1s. 4d., 1 seer per rupee=(about) 3 lb. for 2s., 2 seers per rupee=(about) 6 lb. for 2s., and so on.

The name of the unit for square measurement in India generally is the *bigha*, which varies greatly in different parts of the country. But areas have been expressed in this work either in square miles or in acres.

Proposed reforms.—Indian weights and measures have never been settled upon an organised basis suitable for commerce and trade characteristic of the modern age. They vary from town to town and village to village in a way that could only work satisfactorily so long as the dealings of towns and villages were self-contained and before roads and railways opened up trade between one and the other. It is pointed out that in England a hogshead of wine contains 63 gallons and a hogshead of beer only 54 gallons; that a bushel of corn weighs 46 lbs. in Sunderland and 240 lbs. in Cornwall; that the English stone weight represents 14 lbs. in popular estimation, but only 5 lbs., if we are weighing glass, and eight for meat, but 6 lbs. for cheese. Similar instances are multiplied in India by at least as many times as India is bigger than England. If we take, for instance, the maund denomination of weight common all over India, we shall find that in a given city there are nearly as many maunds as there are articles to weigh. If we consider the maund as between district and district the state of affairs is worse. Thus in the United Provinces alone, the maund of sugar weighs 48¾ seers in Cawnpore, 40 in Muttra, 72½ in Gorakhpur, 40 in Agra, 50 in Moradabad, 43¾ in Saharanpur, 50 in Bareilly, 46 in Fyzabad, 48¼ in Shahjehanpur, 51 in Goshangunge. The maund

varies throughout all India from the Bengal or railway maund of 82-2/7 lbs. to the Factory maund of 74 lbs. 10oz. 11drs., the Bombay maund of 28 lbs., which apparently answers to the Forest Department maund in use at the Fuel Depot, and the Madras maund, which some authorities estimate at 25 lbs. and others at 24 lbs. and so on.

Committees of Inquiry.—These are merely typical instances which are multiplied indefinitely. There are variations of every detail of weights and measures in every part of India. The losses to trade arising from the confusion and the trouble which this state of things causes are heavy. Municipal and commercial bodies are continually returning to the problem with a view to devising a practical scheme of reform. The Supreme and Provincial Governments have made various attempts during 40 years past to solve the problem of universal units of weights and measures and commerce and trade have agitated about the question for the past century. The Indian railways and Government departments adopted a standard tola (180 grains), seer (80 tolas) and maund (40 seers) and it was hoped that this would act as a successful "lead" which would gradually be followed by trade throughout the empire, but the expectation has not been realised.

The Government of India considered the whole question in consultation with the provincial Governments in 1890-1894 and various special steps have at different times been taken in different parts of India. The Government of Bombay appointed a committee in 1911 to make proposals for reform for the Bombay Presidency. Their final report has not been published, but they presented in 1912 an *ad interim* report which has been issued for public discussion. In brief, it points out the practical impossibility of proceeding by compulsory measures affecting the whole of India. The Committee stated that over the greater part of the Bombay Presidency a standard of weights and measures would be heartily welcome by the people. They thought that legislation compulsorily applied over large areas subject to many diverse conditions of trade and social life would not result in bringing about the desired reform so successfully as a "lead" supplied by local legislation based on practical experience. The want of coherence, *savoir faire*, or the means of co-operation among the people at large pointed to this conclusion. The Committee pointed out that a good example of the results that will follow a good lead is apparent in the East Khandesh District of the Presidency, where the District Officer, Mr. Simcox, gradually, during the course of three years, induced the people to adopt throughout the district uniform weights and measures, the unit of weight in this case being a tola of 180 grains. But the committee abstained from recommending that the same weights and measures should be adopted over the whole Presidency, preferring that a new system started in any area should be as nearly as possible similar to the best system already prevailing there.

Proposals from England.—Suggestions have been made by the British Weights and Measures Association and the Decimal Association, respectively, at different times that British weights and measures and the decimal system should be introduced. Both proposals fail to meet the special requirements set forth by the Bombay Committee. Variations of them which have been put forward by different bodies in India in recent years are that the English pound weight and the English hundredweight should be adopted as the unit of weight for all India. The argument in favour of the importation of an outside unit in this manner is that people in India will always associate with a given, familiar denomination of weight or measure the value they have been accustomed to consider in regard to it, but that if a new weight were introduced they would learn to use it in dealing with their neighbours, without the interference of anything resembling prejudice at what they might regard as an attempt to tamper with their old, traditional standards of dealing.

Committee of 1913.—The whole problem was again brought under special consideration by the Government of India in October, 1913, when the following committee was appointed to inquire into the entire subject anew:—

Mr. C. A. Silberrad (*President*).
Mr. A. Y. G. Campbell.
Mr. Rustomji Pardoonji.

This Committee reported, in August, 1915, in favour of a uniform system of weights to be adopted in India based on the 180 grain tola. The report says:—Of all such systems there is no doubt that the most widespread and best known is that known as the Bengal or Indian Railway weights. The introduction of this system involves a more or less considerable change of system in parts of the United Provinces (Gorakhpur, Bareilly and neighbouring areas), practically the whole of Madras, parts of the Punjab (rural portions of Amritsar and neighbouring districts), of Bombay (South Bombay, Bombay city and Gujarat), and the North West Frontier Province. Burma has at present a separate system of its own which the committee think it should be permitted to retain. The systems recommended are:—

FOR INDIA.

8 khaskhas	= 1 chawal
8 chawals	= 1 ratti
8 rattis	= 1 masha
12 mashes or 4 tanks	= 1 tola
5 tolas	= 1 chatak
16 chataks	= 1 seer
40 seers	= 1 maund

FOR BURMA.

2 small ywes	= 1 large ywe
4 large ywes	= 1 pe
2 pes	= 1 mu
5 pes or 2½ mus	= 1 mat
1 mat	= 1 ngamu
2 ngamus	= 1 tikal
100 tikals	= 1 peiktha or viss.

The tola is the tola of 180 grains, equal to the rupee weight. The viss has recently been fixed at 3·60 lbs. or 140 tolas.

The recommendations of the Commission met with general approval and have been referred to the Provincial Governments for their consideration

Legislation and Inspection.

The conditions of factory labour until 1913 were regulated by the Indian Factories Act of 1881, as amended in 1891. The chief provisions of the amended Act were Local Governments were empowered to appoint inspectors of factories, and certifying surgeons to certify as to the age of children. A mid-day stoppage of work was prescribed in all factories, except those worked on an approved system of shifts, and Sunday labour was prohibited, subject to certain exceptions. The hours of employment for women were limited to 11, with intervals of rest amounting to at least an hour and a half; their employment between 8 p.m. and 5 a.m. was prohibited, as a general rule, except in factories worked by shifts. The hours of work for children (defined as persons below the age of 14) were limited to seven, and their employment at night time was forbidden; children below the age of nine were not to be employed. Provision was made for the fencing of machinery and for the promulgation of rules as to water supply, ventilation, the prevention of overcrowding, etc.

Act of 1911.

The decision to undertake further legislation was arrived at after comprehensive inquiries. An important factor in the case was the increasing use of electric light in the Bombay Mills, which radically changed the conditions prevailing when the Act of 1891 was passed and had abolished the security that operatives would not be employed for more than 12 hours a day on the average. The question of the hours of employment in textile factories was brought into prominence by the period of prosperity that the cotton industry began to enjoy in the cold weather of 1904-05, a large number of persons operatives being regularly worked for 15 hours a day or even longer.

Owing to complaints regarding the long hours worked in many mills, the Government of India in 1906 appointed a small Committee with Commander Sir H. P. Freer-Smith, R.N., late Superintending Inspector for Dangerous Trades in England, as chairman, to conduct a preliminary inquiry into the conditions of labour in textile factories. The Committee recommended that the working hours of adult males should be limited to 12 hours a day; that certificates of age and physical fitness should be required prior to half-time employment and prior to employment as an adult; that night work of women should be prohibited; and that whole-time Medical Inspectors should be appointed.

The conclusions of this Committee formed the basis of an investigation, extending to all factories in India, by a representative Commission. This report disclosed the existence of abuses, particularly in connection with the employment of children, and the excessive hours worked by operatives generally in textile factories. The majority of the Commission deprecated a statutory limitation of the working hours of male adults. But they recommended the formation of a class of "young persons" between 14 and 17 years of age, whose hours should be limited to 12, and considered that this would indirectly secure a 12 hours' day for male adults. They also recommended that the hours of work for children should be reduced from 7 to 6 hours and that the hours for women should be assimilated to those for "young persons," night work being prohibited for both classes. They recommended that children should be certified as to age and physical fitness.

Hours fixed.

The recommendations of the Committee and of the Commission having been considered by the Government of India and the Local Governments, a Bill was introduced in July 1908 to amend and consolidate the law relating to factories, and was finally passed into law as Act XII of 1911.

The new Act extended the definition of "factory" so as to include seasonal factories working for less than four months in the year, shortened the hours within which children (and, as a general rule, women) may be employed, and further restricted the employment of women by night by allowing it only in the case of cotton-ginning and pressing factories. It also contained a number of new provisions for securing the health and safety of the operatives, making inspection more effective, and securing generally the better administration of the Act. The most important feature of the Act, however, was the introduction of a number of special provisions applicable only to textile factories. The report of the Factory Commission showed that excessive hours were not worked except in textile factories. The Act for the first time applied a statutory restriction to the hours of employment of adult males by laying down that, subject to certain exceptions, "no person shall be employed in any textile factory for more than twelve hours in any one day." It is also provided in the case of textile factories that no child may be employed for more than six hours in any one day, and that (subject to certain exceptions, among which are factories worked in accordance with an approved system of shifts) no person may be employed before 5-30 a.m. or after 7 p.m. (the new limits laid down generally for the employment of women and children). Corresponding limitations are placed on the period for which mechanical or electrical power may be used.

Factory Inspection.

The inquiries of the Factory Commission showed that the then existing system of factory inspection had not sufficed to prevent widespread evasion of the provisions of the factory law. This result was attributed to the fact that the number of full-time factory inspectors was very small, the work of inspection being to a large extent in the hands of ex-officio inspectors (District Magistrates, Civil Surgeons, etc.), who, as the Commission reported, had neither the time nor the special knowledge necessary for the work. In Bombay Presidency, where there were three special inspectors, it was reported that the Act was on the whole well enforced. Steps have been taken since to reorganise the staff of whole-time inspectors of factories in India and to

increase it to a strength sufficient to cope with the work of inspecting all the factories in India. The total strength of the staff is now 14, as compared with 6 at the time of the Factory Commission's report. Each of the larger provinces has at least one inspector, Bombay having five. Except that in a few cases these officers have duties also in connection with boiler inspection, their whole time is given to factory inspection. The District Magistrate remains an inspector, ex-officio, under the new Act, and other officers may be appointed additional inspectors, but it is contemplated that inspection by ex-officio inspectors will be to a large extent discontinued, or limited to special cases.

Life Insurance.

There are no publications from which a complete statistical survey of the various branches of insurance work in India can be obtained, but the official "Statements of Accounts and Abstracts of Actuarial Reports in respect of 70 Life Assurance Companies doing business in British India," published by the Government of India, give much information in regard to Life Assurance Companies subject to all the provisions of the Indian Life Assurance Companies Act, 1912, and some of those which are partially exempt from the Indian Act on the ground that they carry on business in the United Kingdom and comply with the provisions of the British Assurance Companies Act of 1909. It should be noticed that the various pension funds connected with Government services are exempt from the compliance with the Indian Act.

The oldest of the Indian Companies were established in Madras about 80 years ago: Bombay has none older than the Bombay Mutual, the Oriental and the Bombay Widows' Pension Fund which were established about 40 years ago. Life Assurance seems not to have been started in Bengal until much later, and it was not until 1906 that many Companies were established either in that Presidency or elsewhere in India.

In his introductory note to the official publication already mentioned, Mr. H. G. W. Meikle, Actuary to the Government of India, states that the total amount of the investments and other **realisable assets** of Indian Companies is worth nearly 730 crores of rupees; more than two-thirds of this, however, represent the investments of one Company, namely, the Oriental of Bombay.

The total sums assured, including bonus additions under ordinary life assurance policies issued by Indian companies, decreased by 3 per cent. during the year 1916 and amounted to over 22 crores of rupees, or about 15 million pounds sterling.

The new sums assured by Indian companies, under ordinary life assurance policies during the year again shows a considerable decrease the total amount being about 1¾ crores as against 3½ and 2¼ crores in each of the two previous years, respectively.

Whole Life policies were issued last year for	21 lakhs or	12·1	of the total.
Limited Payment policies ,, ,,	14 ,,	7·7	,,
Endowment Assurance policies ,, ,,	135 ,,	77·2	,,
Children's Endowments and other classes of policies ,, ,,	5 ,,	3·0	,,
Total ..	175 lakhs	100	

The following is the list of British, Colonial and Foreign Companies doing business both in the United Kingdom and in India partially exempted from the Indian Act, and the classes of business, in addition to Life Assurance, transacted by them:—

Name of Company.	Place of Head Office.	Life Annuities.	Annuities certain Capital redemption, etc.	Fire.	Marine.	Accident and Sickness.	Employers' Liability.	Burglary and Fidelity Guarantee, etc.
1. Alliance	London	*a*	C	F	M	S	E	G
2. Atlas	London	*a*	C	F	..	S	E	G
3. Commercial Union	London	*a*	C	F	M	S	E	G
4. Gresham	London	*a*	C	..	..	..	..	..
5. Law Union and Rock	London	*a*	C	F	..	S	E	G
6. Liverpool and London and Globe	Liverpool	*a*	C	F	M	S	E	G
7. London Assurance Corporation	London	*a*	C	F	M	S	E	G
8. North British and Mercantile	Edinburgh	*a*	C	F	..	..	..	..
9. Northern	Aberdeen	*a*	C	F	..	S	E	G
10. Norwich Union	Norwich	*a*	C	..	..	..	..	..
11. Phœnix	London	*a*	C	F	M	S	E	G
12. Royal	Liverpool	*a*	C	F		S	E	G
13. Royal Exchange	London	*a*	C	F	M	S	E	G
14. Scottish Union and National	Edinburgh	*a*	C	F	M	S	E	G
15. Standard	Edinburgh	*a*		..	..	..	..	..
16. Manufacturers	Canada	*a*	..	..	..	..	..	..
17. Sun of Canada	Canada	*a*	C	..	..	S	..	..
18. National Mutual of Australasia	Australia	*a*						
19. New York	United States	*a*						
20. China Mutual	Shanghai	*a*						
21. Royal London Auxiliary	London	*a*	C	F	..	S	..	G
22. Yorkshire	York	*a*	C	F	M	S	E	G
23. Great Eastern	Singapore	*a*						
24. Shanghai	Shanghai	*a*						

In the following list the names of the existing Indian Life Assurance Companies have been arranged according to the date of establishment under the Province in which they were established :—

Years.	Madras.	Bombay.	Bengal.	Punjab.	United Provinces, Assam, Ajmer-Merwara and Civil and Military Station of Bangalore.
1829 ..	Madras Equitable ..	....	....	....	....
1833 ..	Madras Widows' ..	....	....	....	....
1847 ..	....	....	....	Christian Mutua	....
1849 ..	Tinnevelly C. M. S. Widows' Fund.	....	....	....	....
1871 ..	....	Bombay Mutual ..	....	....	....
1874 ..	....	Oriental ..	....	....	....
1876 ..	....	Bombay Widows' ..	....	....	....
1885 ..	....	....	....	....	....
1886 ..	....	Goan Mutual Help ..	....	....	....
1887 ..	....	....	....	....	....
1888 ..	Mangalore Roman Catholic	B. B. & C. I. Zoroastrian ..	....	....	....
1889 ..	....	Bombay Zoroastrian ..	....	....	....
1890 ..	....	....	....	....	....
1891 ..	....	Gujrat Zoroastrian ..	Hindu Provident Fund ..	....	....
1892 ..	....	Indian Life ..	....	....	....
1893 ..	....	....	....	....	Indian Empire Branch of Rechabites (United Provinces)
1894 ..	....	Sind Hindu Provident ..	....	....	....
1895 ..	....	....	....	....	....

In the following list the names of the existing Indian Life Assurance Companies have been arranged according to the date of establishment under the Province in which they were established :—

Years.	Madras.	Bombay.	Bengal.	Punjab.	United Provinces, Assam, Ajmer-Merwara and Civil and Military Station of Bangalore.
1896 ..	....	Empire of India ..	....	Bharat ..	....
1897 ..	....	....	....	....	....
1898 ..	....	....	....	....	....
1899 ..	....	....	....	....	....
1900 ..	....	....	....	....	....
1901 ..	....	....	....	Simla Mutual ..	....
1902 ..	....	....	....	....	....
1903 ..	....	....	....	....	....
1904 ..	....	....	....	....	....
1905 ..	....	....	....	....	....
1906 ..	Coromandel ; United India.	All India United ..	National Indian ; National Insurance.	Co-Operative ..	....
1907 ..	....	....	Hindusthan Co-Operative ..	....	....
1908 ..	....	Bombay Life ..	India Equitable ..	Hindustan (Gujranwala) ..	General (Ajmer-Merwara).
1909 ..	....	....	Chittagong ..	....	....
1910 ..	....	....	Bengal Mercantile ..	Popular ..	Aryya (Assam).
1911 ..	....	Asian Commercia ..	Universal ..	....	....
1912 ..	....	....	Unique ..	....	....
1913 ..	....	Industrial & Prudential ; Western India ; East and West.	Light of Asia ; Provincial ..	....	....
1914 ..	....	....	....	British Indian ..	....
1915 ..	....	....	....	....	All India and Burma (Bangalore).

Chambers of Commerce.

Modern commerce in India was built up by merchants from the west and was for a long time entirely in their hands. Chambers of Commerce and numerous kindred Associations were formed by them for its protection and assistance. But Indians have in recent years, taken a large and growing part in this commercial life. The extent of their participation varies greatly in different parts of India, according to the natural proclivities and genius of different races. Bombay, for instance, has led the way in the industrial and commercial regeneration of the new India, while Bengal, very active in other fields of activity, lags behind in this one. Arising from these circumstances we find Chambers of Commerce in Bombay, Karachi, Calcutta, Madras and other important centres, with a membership both European and Indian; but alongside these have sprung up in recent years certain Associations, such as the Bombay Indian Merchants' Chamber and Bureau, of which the membership is exclusively Indian. These different classes of bodies are in no sense hostile to one another and constantly work in association.

The London Chamber of Commerce in 1912, realising the increasing attention demanded by the economic development of India, took steps to form an "East India Section" of their organization. The Indian Chambers work harmoniously with this body, but are in no sense affiliated to it, nor is there at present any inclination on their part to enter into such close relationship, because it is generally felt that the Indian Chambers can themselves achieve their objects better and more effectively than a London body could do for them, and on various occasions the London Chamber, or the East India Section of it have shown themselves out of touch with what seemed locally to be immediate requirements in particular matters.

A new movement was started in 1913 by the Hon. Sir Fazulbhoy Currimbhoy Ibrahim, a leading millowner and public citizen of Bombay, which promises to lead to great improvement in strengthening Indian commercial organization. Sir Fazulbhoy's original plan was for the formation of an Indian Commercial Congress. The proposal met with approval in all parts of India. The scheme was delayed by the outbreak of war but afterwards received an impetus from the same cause and the first Congress was held in the 1915 Christmas holiday season in the Town Hall, Bombay. The list of members of the Reception Committee showed that all the important commercial associations of Bombay were prepared to co-operate actively.

The Congress was attended by several hundred delegates from all parts of India. Mr. D. E. Wacha, President of the Bombay Indian Merchants' Chamber, presided, as Chairman of the Reception Committee, at the opening of the proceedings and the first business was the election of Sir Fazulbhoy Currimbhoy as the first President. The Congress resolved upon the establishment of an Associated Indian Chamber of Commerce, and elected a Provincial Committee empowered to take the necessary steps to get the Association registered and to enrol members and carry on work as Committee of the Chamber until a new Committee should be appointed a year later. The Congress also approved of the draft constitution.

The following are the principal paragraphs of a Memorandum of Association of the new Associated Chamber as approved by the Congress:—

I. The name of the Chamber will be "THE ASSOCIATED INDIAN CHAMBER OF COMMERCE."

II. The Registered Office of the Chamber will be in Bombay.

III. The objects for which the Chamber is established are:—

(*a*) To discuss and consider questions concerning and affecting trade, commerce, manufactures, and the shipping interests, at meeting of delegates from Indian Chambers of Commerce and Commercial Associations or Bodies and to collect and disseminate information from time to time on matters affecting the common interests of such Chambers or Associations or Bodies and the commercial, manufacturing and shipping interests of the country.

(*b*) To communicate the opinions of the Chambers of Commerce and other Commercial Associations or Bodies separately or unitedly, to the Government or to the various departments thereof, by letter, memorial, deputation or otherwise.

(*c*) To petition Parliament or the Government of India or any Local Government or authority on any matter affecting trade, commerce, manufacture or shipping.

(*d*) To prepare and promote in Parliament or in the Legislative Councils of India, both Imperial and Provincial, Bills in the interest of trade, commerce, manufactures, and shipping of the country and to oppose measures which, in the opinion of the Chamber, are likely to be injurious to those interests.

(*e*) To attain those advantages by united action which each Chamber or Association or body may not be able to accomplish in its separate capacity.

(*f*) To have power to establish an office either in England or in any part of British India with an Agent there, in order to ensure to the various Chambers early and reliable information on matters affecting their interests and to facilitate communication between the Chamber or individual chambers and the Government or other public bodies, and generally to conduct and carry on the affairs of the Chamber.

(*g*) To organise Chambers of Commerce, Commercial Associations or Bodies in different trade centres of the Country.

(*h*) To convene when necessary the Indian Commercial Congress at such places and at such times as may be determined by a Resolution of the Chamber.

(*i*) To do all such other things as may be incidental or conducive to the above objects.

The Articles of Association provide for the management of the Chamber by an Executive Council composed of a President, Vice-President, and ten other members elected at the annual meeting of the Associated Chamber; the Executive Council to present a report and statement of accounts at each annual meeting. The Articles declare the number of members of the Associated Chamber not to exceed one hundred, and the Executive Council are given power to elect honorary members. "There shall be an annual meeting of the Associated Indian Chamber held at Bombay on a date to be fixed by the Executive Council in the month of February," or at some other time, and "semi-annual or special meetings . . . may be convened by the Executive Council or on the requisition of one-third of the total number of members addressed to the Secretary . . . "

The following are details of the principal Chambers of Commerce and kindred bodies in India at the present time :—

BENGAL.

The Bengal Chamber of Commerce was founded in 1834. Its head-quarters are in Calcutta. Other societies connected with the trade and commerce of the city are the Royal Exchange, the Bengal Bonded Warehouse Association, the Calcutta Trades Association, the Bengal National Chamber of Commerce and the Marwari Chamber of Commerce. The Bengal Chamber is registered with a declaration of membership of 200. Its objects are the usual purposes connected with the protection of trade " in particular in Calcutta." There are two classes of members, Permanent and Honorary.

Merchants, bankers, shipowners, representatives of commercial, railway and insurance companies, brokers, persons and firms engaged in commerce, agriculture, mining or manufacture, and joint stock companies or other corporations, formed for any purpose or object connected with commerce, agriculture, mining or manufacture, and persons engaged in or connected with art, science or literature, may be elected as permanent members of the Chamber.

A candidate for election as a permanent member, whether an individual, a firm or a joint stock company or other corporation, must be proposed by one and seconded by another permanent member, and may be elected provisionally by the Committee, but that election is subject to confirmation at the next annual general meeting. The subscription to the funds of the Chamber of permanent members residing or carrying on business in Calcutta is Rs. 25 per mensem, and that of permanent members residing or carrying on business elsewhere than in Calcutta Rs. 32 per annum. No entrance fee is charged. Honorary members are not required to subscribe to the funds of the Chamber. Officials and others indirectly connected with the trade, commerce or manufactures of Bengal, or who may have rendered distinguished service to the interests represented by the Chamber, may be elected honorary members by the Committee upon the proposal of any two permanent members whether members of the Committee or not. Strangers visiting the Presidency may be admitted by the Committee as honorary members for a period not exceeding two months on the proposal of any permanent member whether a member of the Committee or not. Honorary members are entitled to receive the last published report of the Committee, and to attend and speak but not to vote at any general meeting held during their membership, and may upon the invitation of the President, Vice-President or Chairman, as the case may be, attend under the like conditions any meeting of Committee or of any departmental committee or sub-committee.

The affairs of the Chamber are conducted by the following officers, namely, a President, Vice-President, seven ordinary members of Committee, a Secretary and two Assistant Secretaries and an Auditor. The Officers of the Chamber, with the exception of the Secretary, Assistant Secretaries and Auditor, act without remuneration. The following are the President and his Committee appointed for the year 1917-1918 :—

President.—Hon. Sir Hugh Bray (Gillanders, Arbuthnot & Co.).

Vice President.—Hon. Sir Archy Birkmyre (Birkmyre Brothers).

Committee.—Mr. A. Cameron (Mackinnon, Mackenzie & Co.), Hon. Mr. F. W. Carter, C.I.E., (Turner, Morrison & Co., Ld.), Messrs. A. M. Clark (Bengal Nagpur Ry.), W. E. Crum (Graham & Co.), H. Harris (Chartered Bank of India, Australia & China), Hon. Mr. W. A. Ironside (Bird & Co.), and Mr. R. V. Mansell (James Finlay & Co., Ld.).

The Secretary of the Chamber is Mr. H. M. Haywood. Asst. Secys.—Mr. D. K. Cumnison and Mr. A. C. Daniel.

The following are the public bodies to which the Chamber has the right of returning representatives, and the representatives returned for the current year :—

Viceroy's Legislative Council.—The Hon'ble Sir Hugh Bray.

Bengal Legislative Council.—The Vice-President of the Chamber and the Hon. Mr. F. W. Carter, C.I.E.

Calcutta Port Commission.—The Hon. Mr. J. Mackenzie (Macneill & Co.), Messrs. W. E. Crum (Graham & Co.), A. Cameron (Mackinnon, Mackenzie & Co.), C. F. Beadel (Becker, Gray & Co.), the Hon. Sir Hugh Bray (Gillanders, Arbuthnot & Co.), Sir Francis Stewart, C.I.E. (Gladstone, Wyllie & Co.).

Calcutta Municipal Corporation.—The Hon. Sir Hugh Bray (Gillanders, Arbuthnot & Co.), Messrs. T. R. Pratt, W. R. Rae (Sun Insurance Office), and Shirley Tremearne (W. H. Targett & Co.).

Bengal Boiler Commission.—Messrs. C. L. Thomson (Barnagore Jute Factory Co., Ltd.), H. H. Reynolds, M.I.C.E. (Bengal Coal Co., Ltd.), and T. Wilson (Jessop & Co., Ltd.).

Board of Trustees of the Indian Museum—Mr. J. B. Lloyd (Shaw, Wallace & Co.).

Benga Smoke Nuisances Commission—Messrs. A. Cochran (Burn & Co., Ltd.) and W. Lamond (Union Jute Co., Ltd.)

Calcutta Improvement Trust—Mr. W. K. Dods (Agent, Hongkong and Shanghai Banking Corporation).

The Chamber elects representatives to various other bodies of less importance, such as the committee of the Calcutta Sailors' Home, and to numerous subsidiary associations. The following are the recognised associations of the Bengal Chamber of Commerce:—

Calcutta Wheat and Seed Trade Association, Indian Jute Mills' Association, Indian Tea Association, Calcutta Tea Traders' Association, Calcutta Fire Insurance Agents' Association, Calcutta Import Trade Association, Calcutta Marine Insurance Agents' Association, The Wine, Spirit and Beer Association of India, Indian Mining Association, Calcutta Baled Jute Association, Indian Paper Makers' Association, Indian Engineering Association, Jute Fabrics Shippers' Association, Calcutta Hydraulic Press Association, Jute Fabric Brokers' Association, Baled Jute Shippers' Association, European Jute Dealers' Association and Calcutta Liners' Conference.

The Chamber maintains a Tribunal of Arbitration for the determination, settlement and adjustment of disputes and differences relating to trade, business, manufactures, and to customs of trade, between parties, all or any of whom reside or carry on business personally or by agent or otherwise in Calcutta, or elsewhere in India or Burmah, by whomsoever of such parties the said disputes and differences be submitted. The Secretary of the Chamber acts as the Registrar of the Tribunal, which consists of such members or assistants to members as may, from time to time, annually or otherwise be selected by the Registrar and willing to serve on the Tribunal. The Registrar from time to time makes a list of such members and assistants.

The Chamber also maintains a Licensed Measurers Department controlled by a special committee. It includes a Superintendent (Mr. Jas. Knox), Deputy Superintendent (Mr. A. H. Lugg) and one Assistant Superintendent and the staff at the time of the last official returns consisted of 132 officers. The usual system of work for the benefit of the trade of the port is followed. The Department has its own provident fund and compassionate fund and Measurers' Club. The Chamber does not assist in the preparation of official statistical returns. It publishes weekly the *Calcutta Prices Current* and its Monthly Supplement and also publishes a large number of statistical circulars of various descriptions in addition to a monthly abstract of proceedings and many other circulars on matters under discussion.

BOMBAY.

The object and duties of the Bombay Chamber, as set forth in their rules and regulations, are to encourage a friendly feeling and unanimity among commercial men on all subjects involving their common good; to promote and protect the general mercantile interests of this Presidency; to collect and classify information on all matters of general commercial interest; to obtain the removal, as far as such a Society can, of all acknowledged grievances affecting merchants as a body, or mercantile interests in general; to receive and decide references on matters of usage and custom in dispute, recording such decisions for future guidance, and by this and such other means, as the Committee for the time being may think fit, assisting to form a code of practice for simplifying and facilitating business; to communicate with the public authorities, with similar Associations in other places and with individuals, on all subjects of general mercantile interests; and to arbitrate between parties willing to refer to, and abide by, the judgment of the Chamber.

The Bombay Chamber was established in 1836, under the auspices of Sir Robert Grant, who was then Governor of the Presidency, and the programme described above was embodied in their first set of rules. There is affiliated with the Chamber the Bombay Millowners' Association, which exists to carry out the same general objects as the Chamber in the special interests of "millowners and users of steam and water power." According to the latest returns, the number of members of the Chamber is 130. Of these 16 represent banking institutions, 5 shipping agencies and companies, 3 firms of solicitors, 3 railway companies, 4 insurance companies, 8 engineers and contractors, 91 firms engaged in general mercantile business.

All persons engaged or interested in mercantile pursuits desirous of joining the Chamber and disposed to aid in carrying its objects into effect are eligible to election to membership by ballot. The member's subscription is Rs. 20 per month and an additional charge of Rs. 240 per annum is made to firms as subscription to the trade returns published by the Chamber. Gentlemen distinguished for public services, or "eminent in commerce and manufactures," may be elected honorary members and as such are exempt from paying subscriptions. Any stranger engaged or interested in mercantile pursuits and visiting the Presidency may be introduced as a visitor by any Member of the Chamber inserting his name in a book to be kept for the purpose, but a residence of two months shall subject him to the rule for the admission of members.

Officers of the Year.

The affairs and funds of the Chamber are managed by a committee of nine ordinary members, consisting of the chairman and deputy-chairman and seven members. The committee must, as a rule, meet at least once a week and the minutes of its proceedings are open to inspection by all members of the Chamber, subject to such regulations as the committee may make in regard to the matter.

A general meeting of the Chamber must be held once a year and ten or more members may requisition, through the officers of the Chamber, a special meeting at any time, for a specific purpose.

The Chamber elects representatives as follow to various public bodies :—

Legislative Council of the Governor-General, one representative. The Chamber may elect anyone, but in practice they have hitherto returned their chairman.

Legislative Council of the Governor of Bombay, one representative, who may also be anyone, but is, in practice, always the deputy chairman.

Bombay Municipal Corporation, two members, elected for three years.

Board of Trustees for the Improvement of the City of Bombay, one member, elected for two years.

Board of Trustees of the Port of Bombay, five members, two and three being elected in alternate years.

Representatives on the Legislative Councils become ex-officio members of the committee of the Chamber, during their terms of office, if they are not already members.

The following are the officers of the Chamber for the year 1917-18 and their representatives on the various public bodies :—

Chairman.—The Hon'ble Mr. Malcolm N. Hogg (Forbes, Forbes, Campbell & Co., Ltd.)

Deputy Chairman.—The Hon'ble Mr. W. M. Ross (Ewart Latham & Co.).

Committee.—Messrs. J. H. Fyfe (Mackinnon, Mackenzie & Co.), S. J. Gillum (The Bombay Co., Ltd.), H. P. Hebblethwaite (Killick Nixon & Co.), Major H. A. L. Hepper, R.E. (G. I. P. Ry.), Messrs. Ralph Kidd (National Bank of India, Ltd.), Nigel F. Paton (W. & A. Graham & Co.), and A. J. Raymond (E. D. Sassoon & Co.).

Secretary : Mr. R. E. Gregor-Pearse.

Representatives on—

Viceregal Legislative Council : The Chairman.

Bombay Legislative Council : The Deputy Chairman.

Bombay Improvement Trust : Mr. A. M. Tod.

Bombay Port Trust : The Hon'ble Mr. Malcolm N. Hogg, Mr. J. S. Wardlaw Milne, Mr. Nigel F. Paton, Mr. A. H. Froom, Mr. T. W. Birkett.

Bombay Municipality : Messrs. A. M. Tod (British Dominions General Insurance Co., Ltd.) and Harry T. Gorrie (South British Insurance Co., Ltd.).

Advisory Board of Sydenham College of Commerce and Economics: Messrs. W. A. Haig Brown and J. S. Wardlaw Milne.

Bombay Smoke Nuisances Commission: The Hon. Mr. Malcolm N. Hogg.

St. George's Hospital Advisory Committee: Sir Stanley Reed, Kt., LL.D.

Special Work.

One of the most important functions performed by the Chamber is that of arbitration in commercial disputes. Rules for this have been in existence for many years and have worked most satisfactorily. The decisions are in all cases given by competent arbitrators appointed by the General Committee of the Chamber and the system avoids the great expense of resort to the Law Courts.

A special department of the Bombay Chamber is its Statistical Department, which prepares a large amount of statistical returns connected with the trade of the port and of great importance to the conduct of commerce. The department consists of eleven Indian clerks who, by the authority of Government, work in the Customs House and have every facility placed at their disposal by the Customs authorities. They compile all the statistical information in connection with the trade of the port, in both export and import divisions, which it is desirable to record. No other Chamber in India does similar work.

The Bombay Chamber publish a Daily Arrival Return which shows the receipts into Bombay of cotton, wheat and seeds, and a *Daily Trade Return, which deals with trade by sea and shows in great detail imports of various kinds of merchandise and of treasure, while the same return contains particulars of the movements of merchant vessels.

The Chamber publishes twice a week detailed reports known as *Import and *Export manifests, which give particulars of the cargo carried by each steamer to and from Bombay.

*Three statements are issued once a month. One shows the quantity of exports of cotton; seeds and wheat from the principal ports of the whole of India. The second gives in detail imports from Europe, more particularly in regard to grey cloths, bleached cloths, Turkey red and scarlet cloths, printed and dyed goods, fancy cloth of various descriptions, woollens, yarns, metals, kerosine oil, coal, aniline dyes, sugar, matches, wines and other sundry goods. The third statement is headed, "Movements of Piece Goods and Yarn by Rail," and show the despatches of imported and local manufactured piece-goods and yarn from Bombay to other centres of trade served by the railways.

*The "Weekly Return" issued by the Chamber shows clearances of a large number of important descriptions of merchandise. A return of "Current Quotations" is issued once a week, on the day of the departure of the English mail, and shows the rates of exchange for Bank and Mercantile Bills on England and Paris, and a large quantity of general banking and trade information.

The annual reports of the Chamber are substantial tomes in which the whole of the

* The publication of these returns has been temporarily suspended by order of Government.

affairs of the Chamber and the trade of the port during the past year are reviewed.

The Chamber has also a Measurement Department with a staff of fourteen, whose business is that of actual measurement of exports in the docks before loading in steamers. Certificates are issued by these officers with the authority of the Chamber to shippers and ship agents as to the measurement of cotton and other goods in bales or packages. The measurers are in attendance on the quays whenever there are goods to be measured and during the busy season are on duty early and late. The certificates granted show the following details:—

(*a*) the date, hour and place of measurement;
(*b*) the name of the shipper;
(*c*) the name of the vessel;
(*d*) the port of destination;
(*e*) the number and description of packages;
(*f*) the marks;
(*g*) the measurement; and, in the case of goods shipped by boats,
(*h*) the registered number of the boat;
(*i*) the name of the tindal.

Bombay Millowners' Association.

The Bombay Millowners' Association was established in 1875 and its objects are as follow:—

(*a*) The protection of the interests of millowners and users of steam, water and/or electric power in India;
(*b*) The promotion of good relations between the persons and bodies using such power;
(*c*) The doing of all those acts and things by which these objects may be furthered.

Any individual partnership or company, owning one or more mill or mills or one or more press or presses or one or more ginning or other factory or factories actuated by steam, water, electric and/or other power is eligible for membership, members being elected by ballot. Every member is entitled to one vote for every complete sum of Rs. 50 paid by him as annual subscription.

The membership of the Association in 1917 numbered 98.

The following is the Committee for 1917:—

The Hon. Sir D. E. Wacha, Kt. (*Chairman*), N. G. Hunt, Esq. (*Dy. Chairman*), The Hon. Sir Dinshaw M. Petit, Bart, Sir Sassoon David, Bart, The Hon. Sir Fazulbhoy Currimbhoy, Kt., Sir Vithaldas D. Thackersey, Kt., The Hon'ble Mr. C. V. Mehta, The Hon. Mr. Munmohandass Ramji, W. H. Brady, Esq., B. Brown, Esq., Rahimtoola Currimbhoy Ebrahim, Esq., Mathradas Goculdas, Esq., Narottam M. Goculdas, Esq., Cowasjee Jehangir, Esq. (*Jun.*), J. H. Latimer, Esq. Meyer Nissim, Esq., Jehangir B. Petit, Esq., N. B. Saklatwalla, Esq., C. N. Wadia, Esq., N. N. Wadia, Esq.,

Mr. R. E. Gregor-Pearse, *Secretary*.

The following are the Association's Representatives on public bodies:—

Legislative Council of H. E. the Governor of Bombay: The Hon'ble Sir Dinshaw M. Petit, Bart.

Bombay Port Trust; Sir Vithaldas D. Thackersey, Kt.

City of Bombay Improvement Trust: Sir Sassoon David, Bart.

Victoria Jubilee Technical Institute: Mr. Jehangir Bomanjee Petit.

Bombay Smoke Nuisances Commission: Messrs. C. N. Wadia and W. A. Sutherland.

Advisory Board of Sydenham College of Commerce and Economics: Mr. N. N. Wadia

Indian Merchants' Chamber.

The Bombay Indian Merchants' Chamber and Bureau was established in 1907 with the following objects:—"To encourage a friendly feeling and unanimity among commercial men on all subjects involving their common good; to promote and protect the trade, commerce and manufactures of India and in particular to promote the general commercial interests of the Presidency of Bombay; to consider and deliberate on all questions affecting the rights of Indian Merchants, to represent to the Government their grievances, if any, and to obtain by constitutional methods the removal of such grievances; to collect and compile and distribute in such manner as may be most expedient for purposes of disseminating commercial and economic knowledge, all statistics and other information relating to trade, commerce and finance, specially Indian: as well as to form and maintain a library, and generally to do all such matters as may promote the above objects in view; to arbitrate between parties willing to refer to and abide by the judgment of the Chamber; to receive and decide references of matters of usage and custom in dispute, recording such decisions for future guidance and assisting by this and such other means, as the committee for the time being may think fit, to form a code of practice so as to simplify and facilitate the transaction of business."

The Chamber has not yet taken up the work of arbitration, measurements, etc.

The following bodies are connected directly and indirectly with the Chamber, though no public body is directly affiliated to it:—

The Bombay Native Piece-goods Merchants' Association (which sends a large number of representatives);

The Grain Merchants' Association (which is a member);

The Hindustani Native Merchants' Association (which is a member);

The Bombay Country Tobacco Trade Association;

The Bombay Rice Merchants' Association;

The Bombay Fancy Piece-goods Association;

The Bombay Yarn, Copper and Brass Native Merchants' Association.

The Chamber elects a representative jointly with the Bombay Native Piece-goods Merchants' Association to the Bombay Legislative Council and a representative to the Board of Trustees for the Port of Bombay, whenever it is so notified by the Government (*vide* Act No. 1 of 1909). The Chamber also has the right to elect a representative on the Board of the Sydenham College of Commerce and Economics, Bombay.

Any person engaged in mercantile pursuits or interested in trade and commerce desirous of joining the Chamber is eligible for membership, there being two classes of members, *viz.*, Ordinary and Honorary. Ordinary members shall be (1) Resident members who pay Rs. 30 annual fee, except that if an Association joins as a member it will have to pay an annual fee of Rs. 100, and (2) Mofussil members who pay Rs. 5 as annual fee. An ordinary member also pays an entrance fee of Rs. 50 on being elected.

Gentlemen distinguished for public services or eminent in commerce and manufactures or otherwise interested in the aims and objects of the Chamber may be elected as Honorary members by a General Meeting of the Chamber on the recommendation of the Committee and as such are exempted from paying subscriptions. They are not entitled to vote at any meeting of the Chamber nor are they eligible to serve on the Committee. They are, however, supplied with all the publications of the Chamber free of charge.

The following are the Officers of the Chamber for the year 1917-18:—

Chairman.—Sir Vithaldas Damoder Thackersey.

Vice-Chairman.—The Hon. Mr. Chunilal V. Mehta.

Committee.—The Hon. Sir Dinshah Edulji Wachha, The Hon. Sir Fazulbhoy Currimbhoy, The Hon. Sir Ibrahim Rahimtulla, The Hon. Mr. Lallubhai Samaldas, C.I.E., The Hon. Mr. Manmohandas Ramji, The Hon. Mr. Purshottamdas Thakordas, Sir Shapoorji B. Broacha, The Hon. Mr. Phiroz C. Sethna, Messrs. Devidas Madhaoji Thackersey, Jethabhai Valji, Rewashanker Jagjiwan, Motilal Vallabhji, Motilal Kanji, Chaturbhuj Shivji, Phiroz J. Billimoria, Mulji Haridas, Mathuradas Vasanji Khimji, Ratansey Mulji, S. E. Warden, Morarji Velji, Jamnadas Dwarkadas Dharamsey, W. T. Halai, and J. B. Petit.

The following are the Chambers' representatives on various public bodies:—

Bombay Legislative Council.—The Hon. Mr. Manmohandas Ramji.

Bombay Port Trust.—The Hon. Mr. Manmohandas Ramji.

Advisory Board of the Sydenham College of Commerce.—The Hon. Sir D. E. Wacha.

Industrial Advisory Board of the Government of Bombay.—The Hon. Sir Fazulbhoy Currimbhoy and the Hon. Mr. Manmohandas Ramji

The staff of the Chamber include:—

Secretary.—Mr. S. S. Mehta, B.A.,

Assistant Secretary.—Mr. D. K. Mehta, L.E.E.

Hony. Auditor.—Mr. Ardeshir Edulji Kama, C.A. (A. C. Rice & Co.).

Solicitors:—Messrs. Edgelow, Gulabchand, Wadia & Co.

The Chamber publishes every month a journal in Gujarati giving information on commercial and industrial subjects and publishing all statistics considered important relating to the trade and commerce of India.

Cotton Trade Association.

The Bombay Cotton Trade Association, Limited, was founded in 1876. The objects for which it was established were, *inter alia*, "to adjust disputes between persons engaged in the cotton trade, to establish just and equitable principles in the trade, to maintain uniformity to rules, regulations and usages in the trade, to adopt standards of classification in the trade, to acquire, preserve and disseminate useful information connected with the cotton interests throughout all markets and generally to promote the cotton trade of the City of Bombay and India and augment the facilities with which it may be conducted." In 1892 the Association was incorporated under the Indian Companies Act, 1882, with a Capital of Rs. 50,000, in 50 shares of Rs. 1,000 each. In 1917 the share capital was increased to Rs. 60,000. In addition to the shareholders (Members), the Association had in 1917 153 Associate Members. The affairs of the Company are managed by a Board of Directors not less than nine or more than twenty in number. The present Directorate is constituted as follows:—

Chairman.—Mr. T. D. Moore (New Mofussil Co., Ltd.).

Deputy Chairman.—Mr. Osborne Marshall (Drennen & C).

Messrs. J. L. Ainsworth (Gill & Co.), C. W. du Breul (Breul & Co.), H. F. Bush (The Bombay Co., Ltd.), G. Boyagis (Ralli Brothers), J. P. Chrystal (P. Chrystal & Co.), I. Iguchi (Japan Cotton Trading Co.), J. Muller (Volkart Brothers), N. Takeuchi (Mitsui Bussan Kaisha, Ltd.), C. N. Wadia (The Century Spinning & Weaving Co., Ltd.).

Secretary.—Mr. Noel Wilkinson, B.A., F.I.S.A.

Bombay Native Piece-Goods Merchants' Association.

The objects of the Association are as follow:—(*a*) To promote by creating friendly feelings and unity amongst the Merchants, the business of the piece-goods trade in general at Bombay, and to protect the interest thereof; (*b*) to remove, as far as it will be within the powers of the Association to do so, all the trade difficulties of the piece-goods business and to frame such line of conduct as will facilitate the trade; (*c*) to collect and assort statistics relating to piece-goods and to correspond with public bodies on matters affecting trade, and which may be deemed advisable for the pro-

tection and advancement of objects of the Association or any of them; and (*d*) to hear and decide disputes that may be referred to for arbitration.

The following are the office-bearers for the current year:—

Chairman—The Hon. Mr. Manmohandas Ramji.

Deputy Chairman.—Mr. Devidas Madhavji Thakersey, J.P.

Hon. Joint Secretaries.—Messrs. Lalji Govindji and Goculdas Jivraj Dayal.

Hony. Treasurer.—Mr. Mathuradas Haridas.

Grain Merchants' Association.

The object of this body is "to promote the interests of the merchants and to put the grain and seeds trade on a sound footing." It is an influential body of large membership. The office holders for the current year are as follow:—

Chairman—Mr. Hirji Mulji, of Messrs. Dharsi, Nanji & Co.

Vice-Chairman—Mr. Velji Lakhamsi, B.A., LL.B.

Hony. Secretary—Mr. Shamji Shivji.

Secretary—Mr. Lalshanker Harprasad.

KARACHI.

The objects and duties of the Karachi Chamber are set forth in terms similar to those of Bombay. Qualifications for membership are also similar. Honorary membership is conferred upon "any gentlemen interested in the affairs and objects of the Chamber", subject to election by the majority of the votes of members. All new members joining the Chamber pay Rs. 100 entrance fee and the monthly subscriptions is Rs. 6 for any member contributing Rs. 600 to the Chamber Fund, in addition to entrance fee, and Rs. 12 without such contribution. The subscription for the Chamber's periodical returns is Rs. 5 per month. The affairs of the Chamber are managed by a committee of ten members, consisting of a Chairman, Vice-Chairman and eight members, elected at the annual meeting of the Chamber in January or immediately after. The Chamber elects a representative on the Bombay Legislative Council and three representatives on the Karachi Port Trust. There were last year 56 members of the Chamber, and 7 Honorary Members.

The following are the officers of the Chamber for the current year:—

Chairman.—Mr. M. de P. Webb, C.I.E. (Forbes Forbes Campbell & Co., Ld.)

Vice-Chairman.—The Hon'ble Mr. W. U. Nicholas (Anderson & Co.).

Managing Committee.—Messrs. L. Brachi (James Finlay & Co., Ld.), H. G. Houghton (Donald Graham & Co.), J. M. Lang (Bombay Co. Ld.), J. I. Murray (Ewart Ryrie & Co.), H. F. Püster (Ralli Brothers), T. J. Stephen (National Bank of India, Ld.), D. B. Trevor (North Western Railway), and S. C. Woodward (Clements, Robson & Co.).

Representative on the Bombay Legislative Council—The Hon. Mr. W. U. Nicholas.

Representative on the Karachi Port Trust—Mr. J. R. Baxter, Mr. E. A. Pearson and Mr. S. C. Woodward.

Secretary—Mr. E. L. Rogers.

Public Measurer—Captain S. Mylerist.

The following are the principal ways in which the Chamber gives a special assistance to members. The Committee take into consideration and give an opinion upon questions submitted by members regarding the custom of the trade or of the Port of Karachi. The Committee undertake to nominate European surveyors for the settlements of disputes "as to the quality or condition of merchandise as to the quality in which both parties desire the Chamber to do so." When two members of the Chamber or when one member and a party who is not a member have agreed to refer disputes to the arbitration of the Chamber or of an arbitrator or arbitrators nominated by the Chamber, the Committee will undertake to nominate an arbitrator or arbitrators, under certain regulations. A public measurer is appointed under the authority of the Chamber to measure pressed bales of cotton, wool, hemp, hides and other merchandise in Karachi.

MADRAS.

The Madras Chamber of Commerce was founded in 1886. All merchants and other persons engaged or interested in the general trade, commerce and manufactures of Madras are eligible for membership. Any assistant signing a firm or signing *per pro* for a firm is eligible. Members who are absent from Madras but pay their subscriptions may be represented in the Chamber by their powers-of-attorney, as honorary members, subject to ballot. Honorary members thus elected are entitled to the full privilege of ordinary members. Election for membership is by ballot at a general meeting, a majority of two-thirds of the recorded votes being necessary to secure election. Every member pays an entrance fee of Rs. 100, provided that banks, corporate bodies and mercantile firms may be represented on the Chamber by one or more members and are liable for an entrance fee of Rs. 100 once in ten years each. The subscription shall not exceed Rs. 160 per annum, payable quarterly in advance, subject to reduction from time to time in accordance with the state of the Chamber's finances. Absentees in Europe pay no subscription and members temporarily absent from Madras pay one rupee per month. Honorary members are admissible to the Chamber on the usual conditions. Members becoming insolvent cease to be members but are eligible for re-election without repayment of the entrance donation.

The Chamber undertakes arbitrations and surveys, the granting of certificates of origin and the registration of trade marks. One of the rules for the last named is "that no trade mark on ticket shall be registered on behalf of an Indian firm trading under a European name."

The following publications are issued by the Chamber:—Madras Price Current and Market Report, Tonnage Schedule and Madras Landing Charges and Harbour Dues Schedule.

There are 40 members and five honorary members of the Chamber in the current year and the officers and committee for the year are as follows:—

Chairman.—The Hon'ble Mr. Gordon Fraser.

Vice-Chairman—Sir Bernard Hunter.

Committee.—Mr. A. J. Leech, Mr. H. P. M. Rae, Mr. A. P. Symonds, Mr. F. E. L. Worke, Mr. F. B. Wathen.

Acting Secretary.—Mr. T. E. Welby.

Secretary.—Mr. A. E. Lawson, C.I.E.

The following are bodies to which the Chamber are entitled to elect representatives, and the representatives elected for the year:—

Madras Legislative Council—The Hon'ble Mr. Gordon Fraser.

Madras Port Trust—The Hon'ble Mr. Gordon Fraser (Messrs. Best & Co., Ld.), Mr. H. P. M. Rae (The Bombay Co., Ld.), Sir Hugh Fraser (Messrs. Gordon Woodroffe & Co.), Mr. R. Todd (Madras & Southern Mahratta Railway Co., Ld.), the Hon'ble Mr. A. Muirhead, C.I.E. (The South Indian Railway Co., Ld.), Mr. J. H. Thonger (Madras Trades' Association).

Madras Municipal Corporation.—Mr. A. J. Leech (Messrs. T. A. Taylor & Co.), Mr. A. P. Symonds (Messrs. Binny & Co., Ld.), A. J. Powell (Madras Electric Tramway Co., Ld.).

Nominated by Government.—The Hon'ble Mr. Gordon Fraser (Best & Co., Ld.), Mr. J. W. Crusha (Wilson & Co.).

British Imperial Council of Commerce, London—Mr. A. J. Yorke (in Europe).

Indian Tea Cess Committee.—Mr. J. C. Armstrong (Parry & Co.).

Southern India Chamber.

The Southern India Chamber of Commerce has its Registered Office in Madras. The objects of the Chamber are those usual for such bodies, concerning the promotion of trade, especially in the Madras Presidency, and the interests of members. Special objects are stated to be:—

"To maintain a Library of books and publications of commercial interest, so as to diffuse commercial information and knowledge amongst its members.

"To establish Museums of commercial products or organise exhibitions, either on behalf of the Chamber or in co-operation with others."

There are two classes of members, permanent and honorary. The usual conditions as to eligibility for election prevail.

The right of electing two representatives to the Madras Port Trust was accorded to the Chamber by the Madras Port Trust Amendment Act, 1915. Members of the Chamber hold seats in the Madras Legislative Council and in the Madras Corporation, but the Chamber does not enjoy the right of electing representatives to these bodies.

President—Rao Bahadur P. Theagaroya Chettiar, B.A.

Vice-Presidents—Khan Bahadur M. A. Kuddus Badsha Sahib and Dewan Bahadur Govindoss Chathurbhoojadoss.

Honorary Secretaries—M. R. Ry. Rao Sahib G. Soobbiah Chetti and Moulana Abdus Subhan Sahib.

Asst. Secretary—C. Duraiswami Aiyangar, B.A.

UPPER INDIA CHAMBER.

The Upper India Chamber of Commerce is concerned with trade, commerce and manufactures in the United Provinces and has its registered office at Cawnpore. Members are elected by the Committee, subject to confirmation by the next general meeting of the Chamber. Honorary members are elected on the usual qualifications, but can neither serve in the Committee nor vote at meetings of the Chamber. There is no entrance fee for membership, but subscriptions are payable as follows:—A firm, company or association having its place of business in Cawnpore, Rs. 200 a year; an individual member, resident or carrying on business in Cawnpore, Rs. 100; Firms or individuals having their places of business or residence outside Cawnpore pay half the above rates, but the maintenance of a branch office in Cawnpore necessitates payment of full rates.

The affairs and funds of the Chamber are managed by a Committee of ten members, which has power to constitute Local Committees, of from four to seven members each, at trade centres where membership is sufficiently numerous to justify the step. Such Local Committees have power to communicate only with the Central Committee.

The Chamber appoints arbitration Tribunals for the settlement and adjustment of disputes when invited to do so, members of the Tribunals being selected from a regular printed list of arbitrators.

The Chamber has in the present year 62 members, four honorary members and five affiliated members.

The following are the officers:—

President—The Hon. Mr. L. P. Watson (Cooper, Allen & Co., Ltd.)

Vice-President—Mr. T. D. Eidelston (Begg Sutherland & Co.).

Members.—Messrs. K. M. Balfour (Allahabad Bank, Ltd.), N. A. S. Bond (E. I. Ry.), T. Smith (Muir Mills Co., Ld.), S. H. Taylor (Elgin Mills Co., Ld.), T. Gavin Jones (Empire Engineering Co.), W. R. Watt (Cawnpore Woollen Mill), W. G. Connor (Allen Bros. & Co. Ltd.), Babu Ram Narain (Budridass Ram Narain).

Secretary.—Mr. J. G. Ryan.

Head Clerk.—Mr. B. N. Ghosal.

PUNJAB.

The Punjab Chamber of Commerce has its headquarters at Delhi and exists for the care of mercantile interests on the usual lines in the Punjab, the North-West Frontier Province and Kashmir. There are affiliated branches of the Chamber at Lahore and Amritsar. Members are elected by ballot, the only necessary qualification being interest in mercantile pursuits. There is no entrance fee. The rate of subscription is Rs. 10 per month. The Chamber returns one member to a seat on the Punjab Legislative Council and one on the Municipal Corporation, Delhi.

The following are the Officers, Committee and Representatives on public bodies for the current year:—

President—The Hon'ble Mr. James Currie (Messrs. James Currie & Co.).

Vice-President.—Mr. R. Macpherson (Chartered Bank of India, Australia and China).

Committee.—Mr. J. G. Griffin (Delhi Electric Tramways and Lighting Co., Ld.), Mr. N. A. S. Bond (The East Indian Railway), Mr. D. N. Bhanja (Messrs. Kerr, Tarruck & Co.), Mr. F. C. Waller (Messrs. F. C. Waller & Co.), Mr. J. Dale Green (The North Western Railway), Mr. W. Angelo (Alliance Bank of Simla, Ld.), Lala Girdhari lal (Amritsar Flour and General Mills Co., Ld.), Lala Motiram Mehra (Messrs. Motiram Mehra & Co.).

Representative on Punjab Legislative Council—The Hon'ble Mr. James Currie.

Representative on Delhi Municipal Committee—Mr. J. C. Roberts (Messrs. Gutmann & Co.).

Secretary—Mr. J. Renton Denning, F.R.S.A.

The Chamber is affiliated with the British Imperial Council of Commerce, London, and is represented in England by Sir James Walker, Alliance Bank of Simla, and Mr. H. C. Chalmers, National Bank of India, Ltd., London.

UNITED PROVINCES.

A meeting of Indians engaged or interested in the trade and industry of the United Provinces was held at Cawnpore in February 1914 to inaugurate an Indian Chamber for the United Provinces. Representatives of firms in Cawnpore, Benares, Allahabad, Lucknow, Fyzabad and other places were present. It was unanimously resolved to establish a United Provinces Chamber of Commerce with its headquarters at Cawnpore. The Chamber has been registered under the Indian Companies Act and has been recognised by the Provincial Government, which has granted the privilege of nominating two members of the Chamber to the Cawnpore Municipal Board. The total number of members of the Chamber in 1917 was 79.

The following are the office holders of the Chamber appointed in 1917:

President—R. B. Lala Bishamber Nath Sahib (Ram Ratan Ram Gopal, Proprietor, Sri Krishna Ginning Factory, Director, Punjab National Bank Ld., Cawnpore).

Vice-Presidents—The Hon'ble Mr. C. Y. Chintamani (Allahabad), B. Alakh Dhari Sahib (Inspector-General of Commerce and Industry, Gwalior), Lala Mamman Lal Sahib (Contractor, Cawnpore).

Hony. Secretary—B. Vikrmajit Singh Sahib (Director, Punjab National Bank Ld. and the Newspapers Limited), Messrs Ramchandra Gur Sahai (Mull Cotton Mills Co., Ltd., Cawnpore).

Hony. Joint Secretary—Mr. B. N. Sen (Merchant, Cawnpore).

Committee.—Rai Krishna Jee (Benares), the Hon. Mr. B. Madhusudan Dial (Hapur), Messrs. B. Sri Ram (Ramchandra Gur Sahai, Mull Cotton Mills Co., Ld., Lucknow), B. Dwarka Prasad Singh, Pleader, Cawnpore), Rai Bahadur B. Kanhia Lal Sahib (Cawnpore), Seth Ram Gopal (Kanhia Lal Ram Gopal, Cawnpore), Lala Jairam Das (Lyallpore Sugar Co., Cawnpore), Mr. G. H. Dickson (Indian Distillery, Anwargunj, Cawnpore), Baba Niranjan Singh (Manager, The Punjab National Bank Ld., Cawnpore), Lala Mool Chand Sahib (Sugar Agent, Cawnpore). Lala Ramkumar (Ramakumar Rameshwar Das, Cawnpore).

BURMA.

The Burma Chamber of Commerce, with headquarters at Rangoon, exists to encourage friendly feeling and unanimity among commercial men on all subjects involving their common good, to promote and protect trade, commerce and manufactures and, in particular, the general mercantile interests of the province; to communicate with public authorities, associations and individuals on all matters, directly or indirectly affecting these interests, and to provide for arbitration between parties willing to refer to, and abide by, the judgment of arbitrators appointed by the Chamber. The following are affiliated bodies:—

Burma Fire Insurance Association.

Burma Marine Insurance Agents' Association.

Rangoon Import Association.

Tavoy Chamber of Mines.

The Chamber elects representatives to the following Public Bodies:—

Burma Legislative Council.

Rangoon Port Trust Board.

Rangoon Municipal Committee.

Victoria Memorial Park Trustees.

Pasteur Institute Committee.

Burma Boiler Commission.

All corporations, companies, firms or persons engaged or interested in mercantile pursuits, such as merchants, bankers, shipowners and brokers or who are connected with agriculture, mining, manufactures, insurance, railways, commerce, art, science or literature shall be eligible to become Members of the Chamber. The subscription is Rs. 20 per month. Officials

and others indirectly connected with the trade of the province, or who may have rendered distinguished service to the interests represented by the Chamber, may be elected by the Committee, either on their own motion or on the suggestion of two Members as Honorary Members of the Chamber. Honorary Members are not required to subscribe to the funds of the Chamber.

The Chamber undertakes arbitrations in addition to its ordinary work. It does not publish any statistical returns.

The following are the Officers, Committee and Representatives on public bodies for the current year:—

Chairman.—The Hon. Mr. E. O. Anderson (Bulloch Bros. & Co., Ltd.).

Vice-Chairman.—Sir Arthur Binning, Kt. (Binning & Co.).

Committee.—Messrs. W. Buchanan (Finlay Fleming & Co.), E. J. Holberton (Bombay-Burma Trading Corpn., Ltd.); H. B. Huddleston (Burma Railways), A. R. Finlay (J. A. Begbie & Co.), R. G. Nicoll (Mercantile Bank of India, Ltd.), J. A. Polson (The Irrawaddy Flotilla Co., Ltd.), J. A. Swan (Steel Brothers & Co., Ltd.), G. Whigham (Burma Oil Co., Ltd.).

Secretary—Mr. C. A. Cuttriss.

Representative on the Burma Legislative Council—The Hon'ble Mr. E. O. Anderson.

Representatives on the Rangoon Port Trust Board—Messrs. D. Robertson, W. Buchanan, J. A. Polson and J. A. Swan.

Representative on the Rangoon Municipal Committee—Mr. G. Whigham.

Victoria Memorial Park Trustee—The Hon'ble Mr. E. O. Anderson.

Pasteur Institute Committee.—The Hon'ble Mr. E. O. Anderson.

Burma Boiler Commission.—Mr. H. H. Gallie (Bulloch Bros. & Co., Ltd.).

COCANADA.

The Cocanada Chamber of Commerce was established on 29th October, 1868.

The following are the office-holders of the Cocanada Chamber of Commerce, which has its headquarters at Cocanada, the chief port on the Coromandel Coast, north of Madras:—

Messrs. B. Eddington (Coromandel Co., Ltd.), *Chairman*; A. Gardiner (Coromandel Co., Ltd.), E. H. D'Cruz Wilson & Co.), A. E. Todd (Simson Bros.), M.R.Ry. Rao Bahadur K. Suryanarayanamurty Naidu Garu and G. M. Lake (Innes & Co.), L. C. Parton (Shaw Wallace & Co.), R. J. Hunter (Ripley and Co.), E. Flury (Volkart Bros.), and C. D. Shore (Gordon Woodroffe & Co.).

Secretary—Mr. J. A. Muller.

The rules of the Chamber provide "that by the term 'member' be understood a mercantile firm or establishment, or the permanent agency of a mercantile firm or establishment, or a society of merchants carrying on business in Cocanada, or other place in the Districts of Kistna, Godavari, Vizagapatam, and Ganjam, and duly electing according to the Rules of the Chamber, and that all such be eligible, but only members resident in Cocanada can hold office." Members are elected by ballot. The Committee, when called upon by disputing members or non-members of the Chamber, give their decision upon all questions of mercantile usage and arbitrate upon any commercial matter referred to them for final judgment. In the former case a fee of Rs. 16 and in the latter a fee of Rs. 32 must accompany the reference.

The Committee consist of 3 members, including the Chairman, and the Committee are elected by ballot, the Chairman at the general meeting of January in each year, for a term of 12 months. The entrance fee for each member whose place of business is in Cocanada is Rs. 50 and for each member whose place of business is elsewhere be Rs. 25. The subscription for each member whose place of business is in Cocanada is Rs. 120 per annum, and for each member whose place of business is elsewhere be Rs. 60 per annum, payable quarterly in advance.

A weekly slip of current rates of produce freights, and exchange is drawn up by the Committee.

CEYLON.

The Ceylon Chamber of Commerce was incorporated in 1893, and has its headquarters at Colombo. All firms and persons engaged in the general trade of Ceylon are admissible as members and every person or firm desirous of joining the Chamber must be proposed by one member, seconded by another and balloted for by the whole Chamber. The affairs of the Chamber are conducted by a Board of Directors consisting of Chairman and Vice-Chairman and from 5 to 10 members.

The following is the membership of this Committee at the present time:—

Sir J. Thomson Broom, Kt. (Whittall & Co.) (*Chairman*); Herbert Bois (*Vice-Chairman*) Mr. R. S. Philpott (P. & O. S. N. Co.), Mr. H. S. Jeaffreson, Mr. E. H. Lawrence (National Bank), Mr. W. Philps, Mr. E. S. Clark, Mr. W. Fraser, Mr. C. S. Burns, Mr. M. J. Cary and Mr. J. Lochore.

Secretary.—Mr. A. Duncum.

* The Peoples of India.

It is essential to bear in mind, when dealing with the people of India, that it is a continent rather than a country. Nowhere is the complex character of Indians more clearly exemplified than in the physical type of its inhabitants. No-one would confuse the main types, such as Gurkhas, Pathans, Sikhs, Rajputs, Burmans, Nagas, Tamils, etc., nor does it take long to carry the differentiation much farther. The typical inhabitants of India–the Dravidians–differ altogether from those of Northern Asia, and more nearly resemble the tribes of Malaya, Sumatra and Madagascar. Whatever may be their origin, it is certain that they have settled in the country for countless ages and that their present physical characteristics have been evolved locally. They have been displaced in the North-West by successive hordes of invaders, including Aryans, Scythians, Pathans and Moghals, and in the North-East by Mongoloid tribes allied to those of Burma, which is India only in a modern political sense. Between these foreign elements and the pure Dravidians is borderland where the contiguous races have intermingled.

The people of the Indian Empire are divided by Sir Henry Risley (Caste, Tribe and Race, Indian Census Report, 1901; the Gazetter of India, Ethnology and Caste, Volume I, Chapter 6) into seven main physical types. There would be eight if the Andamese were included, but this tiny group of Negritos may be disregarded.

The Turko-Iranian, represented by the Baloch, Brahui and Afghans of Baluchistan and the North-West Frontier Province. Probably formed by a fusion of Turki and Persian elements, in which the former predominate. Stature above mean; complexion fair; eyes mostly dark, but occasionally grey; hair on face plentiful; head broad; nose moderately narrow, prominent, and very long. The feature in these people that strikes one most prominently is the portentious length of their noses, and it is probably this pecularity that has given rise to the tradition of the Jewish origin of the Afghans.

The Indo-Aryan occupying the Punjab, Rajputana, and Kashmir, and having as its characteristics members the Rajputs, Khattris, and Jats. This type, which is readily distinguishable from the Turko-Iranian, approaches most closely to that ascribed to the traditional Aryan colonists of India. The stature is mostly tall; complexion fair; eyes dark; hair on face plentiful, head long; nose narrow, and prominent, but not specially long.

The Scytho-Dravidian, comprising the Maratha Brahmans, the Kunbis, and the Coorgs of Western India. Probably formed by a mixture of Scythian and Dravidian elements. This type is clearly distinguished from the Turko-Iranian by a lower stature, a greater length of head, a higher nasal index, a shorter nose, and a lower orbito-nasal index. All of these characters, except perhaps the last, may be due to a varying degree of intermixture with the Dravidians. In the higher groups the amount of crossing seems to have been slight; in the lower the Dravidian elements are more pronounced.

The Aryo-Dravidian or Hindustani, found in the United Provinces, in parts of Rajputana, and in Bihar and represented in its upper strata by the Hindustani Brahman and in its lower by the Chamar. Probably the result of the intermixture, in varying proportions, of the Indo-Aryan and Dravidian types. The head-form is long with a tendency to medium; the complexion varies from lightish brown to black; the nose ranges from medium to broad, being always broader than among the Indo-Aryans; the stature is lower than in the latter group, and usually below the average according to the scale. The higher representatives of this type approach the Indo-Aryans, while the lower members are in many respects not very far removed from the Dravidians. The type is essentially a mixed one, yet its characteristics are readily definable, and no one would take even an upper class Hindustani for a pure Indo-Aryan or a Chamar for a genuine Dravidian. The distinctive feature of the type, the character which gives the real clue to its origin and stamps the Aryo-Dravidian as racially different from the Indo-Aryan is to be found in the proportions of the nose.

The Mongolo-Dravidian, or Bengali type of Lower Bengal and Orissa, comprising the Bengal Brahmans and Kayasthas, the Mahomedans of Eastern Bengal, and other groups peculiar to this part of India. Probably a blend of Dravidian and Mongoloid elements, with a strain of Indo-Aryan blood in the higher groups. The head is broad; complexion dark; hair on face usually plentiful; stature medium; nose medium, with a tendency to broad. This is one of the most distinctive types in India, and its members may be recognised at a glance throughout the wide area where their remarkable aptitude for clerical pursuits has procured them employment. Within its own habitat the type extends to the Himalayas on the north and to Assam on the east, and probably includes the bulk of the population of Orissa; the western limit coincides approximately with the hilly country of Chota Nagpur and Western Bengal.

The Mongoloid, type of the Himalayas, Nepal, Assam, and Burma, represented by the Kanets of Lahul and Kulu; the Lepchas of Darjeeling and Sikkim; the Limbus, Murmis and Gurungs of Nepal; the Bodo of Assam; and the Burmese. The head is broad; complexion dark, with a yellow tinge; hair on face scanty; stature short or below average; nose fine to broad; face characteristically flat; eyelids often oblique.

The Dravidian type extending from Ceylon to the valley of the Ganges, and pervading Madras, Hyderabad, the Central Provinces, most of Central India and Chota Nagpur. Its most characteristics representatives are the Paniyans of Malabar and the Santals of Chota Nagpur. Probably the original type of the population of India, now modified to a varying extent by the admixture of Aryan, Scythian, and Mongoloid elements. In typical specimens the stature is short or below mean; the complexion very dark, approaching black; hair plentiful, with an occasional tendency to curl; eyes dark; head long; nose very broad, sometimes depressed at the root, but not so as to make the face appear

* The material in this section is almost entirely taken from the Report on the Census of India, 1911, by Mr. E. A. Gait, C.S.I., C.I.E., I.C.S., Fellow of the Royal Statistical Society.

flat. This race, the most primitive of the Indian types, occupies the oldest geological formation in India, the medley of forest-clad ranges, terraced plateau, and undulating plains which stretches roughly speaking, from the Vindhyas to Cape Comorin. On the east and the west of the peninsular area the domain of the Dravidian is conterminous with the Ghats, while further north it reaches on one side to the Aravallis, and on the other to the Rajmahal Hills. Where the original characteristics have been unchanged by contact with Indo-Aryan or Mongoloid people, the type is remarkably uniform and distinctive. Labour is the birthright of the pure Dravidian whether hoeing tea in Assam, the Duars, of Ceylon, cutting rice in the swamps of Eastern Bengal or doing scavenger's work in the streets of Calcutta, Rangoon and Singapore, he is recognizable at a glance by his black skin, his squat figure, and the negro-like proportions of his nose. In the upper strata of the vast social deposit which is here treated as Dravidian these typical characteristics tend to thin and disappear, but even among them traces of the original stock survive in varying degrees.

It must, however, be clearly understood that the areas occupied by these various types do not admit of being defined as sharply as they must be shown on an ethnographic map. They melt into each other insensibly; and, although at the close of a day's journey from one ethnic tract to another, an observer whose attention had been directed to the subject would realise clearly enough that the physical characteristics of the people had undergone an appreciable change, he would certainly be unable to say at what particular stage in his progress the transformation had taken place.

Contrasts.—The linguistic survey has distinguished in India about a hundred and thirty indigenous dialects belonging to six distinct families of speech. In the domain of religion, though the bulk of the people call themselves Hindus, there are millions of Mahomedans, Animists, Buddhists, Jains, Sikhs, and Christians. So also in respect of social customs. In the north near relatives are forbidden to marry; but in the south consift marriage is prescribed and even closer alliances are sometimes permitted. As a rule, female chastity is highly valued, but some communities set little store by it, at any rate prior to marriage, and others make it a rule to dedicate one daughter to a life of religious prostitution. In some parts the women move about freely; in others they are kept secluded. In some parts they wear skirts; in others trousers. In some parts again wheat is the staple food; in others rice, and in others millets of various kinds. All stages of civilisation are found in India. At one extreme are the land-holding and professional classes, many of whom are highly educated and refined; at the other various primitive aboriginal tribes such as the head-hunting Nagas of Assam and the leaf-clad savages of the southern hills who subsist on vermin and jungle products.

MAIN STATISTICS OF THE INDIAN EMPIRE.

According to the revised areas adopted in the Census of 1911, the Indian Empire contains 1,802,657 square miles, or some 36,000 more than in 1901. About 23,000 square miles have been added owing to the enumeration for the first time of the Agency tracts attached to the North-West Frontier Province. A further 6,500 represent the area of the Sunderbans, or swampy littoral of the Ganges-delta, which was left out of account at previous enumerations. Finally the Frontier State of Manipur has been found to contain about 5,000 square miles more than the estimate made in 1901.

Population Divisions.—The provinces under British administration comprise 1,093,074 square miles, or 60·6 per cent of the total. The remainder is included in the Native States. The total population is 315,156,396, of which British territory contains 244,267,542, or 77·5 per cent. and the Native States 70,888,854 or 22·5 per cent.

Comparisons with Europe.—These stupendous figures can be grasped only by contrast. The Indian Empire is equal to the whole of Europe, except Russia. Burma is about the same size as Austria-Hungary; Bombay is comparable in point of area with Spain; Madras, the Punjab, Baluchistan, the Central Provinces and Berar and Rajputana are all larger than the British Islands; the United Provinces and Bihar and Orissa than Italy; and Hyderabad and Kashmir than Great Britain excluding Yorkshire.

The population of India exceeds that of Europe without Russia, and is considerably more than three times that of the United States of America. The United Provinces and Bengal, with the States attached to them, both have as many inhabitants as the British Islands, Bihar and Orissa as France, Bombay as Austria, and the Punjab as Spain and Portugal combined. The population of the Central Provinces and Berar approaches that of Brazil; Hyderabad and Burma have as many inhabitants as Egypt; Central India and Rajputana as Scotland and Ireland combined; and Assam as Belgium.

Density.—In the whole Empire there are on the average 175 persons to the square mile, or much the same as Europe outside Russia. In British territory the number to the square mile is 223 and in the Native States 100; the former figure exceeds by 34 the density ratio in France and the latter is indentical with that in Spain.

There are great local variations in density. In nearly two-thirds of the districts, and States, the number of persons to the square mile is less than 200, and in about a quarter it ranges from 200 to 500. The units with less than 100 persons to the square mile covers two-fifths of the total area, but contains only one-eleventh of the population.

Causes of Density.—The productiveness of the soil is the main factor in determining the density of the Indian people. The most thickly peopled tracts are the level plains where practically every inch of the land is fit for tillage. This is notably the case in Bengal and Bihar and the United Provinces East. The next most densely peopled tracts are the low-lying plains along the sea coast in the southern part of the peninsula. In the United Provinces West and the Punjab East the configuration of the surface is equally favourable; the rainfall is more scanty and less

	1911.	1901.	1891.	1881.	1872.
INDIA	315,156,396	294,361,056	287,314,671	253,896,330	206,162,360
PROVINCES	244,267,542	231,605,940	221,240,836	198,882,817	185,163,435
Ajmer-Merwara	501,395	476,912	542,358	460,722	396,331
Andamans and Nicobars	26,459	24,649	15,609	14,628	....
Assam	6,713,635	5,841,878	5,477,302	4,907,792	4,150,769
Baluchistan	414,412	382,106	....	....	....
Bengal	45,483,077	42,141,477	39,089,632	36,316,728	34,119,465
Bihar and Orissa	34,490,084	33,242,783	32,876,557	30,988,320	26,486,482
Bihar	23,752,969	23,360,212	23,581,538	22,418,367	19,735,627
Orissa	5,131,753	4,982,142	4,666,227	4,343,964	3,603,156
Chota Nagpur	5,605,362	4,900,429	4,628,792	4,225,989	3,147,699
Bombay (Presidency)	19,672,642	18,559,650	18,878,471	16,494,538	16,301,362
Bombay	16,113,042	15,304,766	15,959,292	14,042,621	14,075,508
Sind	3,513,435	3,210,910	2,875,100	2,875,100	2,206,565
Aden	46,165	43,974	44,079	34,860	19,280
Burma	12,115,217	10,490,624	7,722,053	3,736,771	2,747,148
Central Provinces and Berar	13,916,308	11,971,452	13,048,972	11,943,363	9,951,268
Central Provinces	10,859,146	9,217,436	10,151,481	9,270,690	7,723,614
Berar	3,057,162	2,754,016	2,897,491	2,672,673	2,227,654
Coorg	174,976	180,607	173,055	178,302	168,312
Madras	41,405,404	38,229,654	35,644,428	30,841,154	31,230,622
North-West Frontier Province (Districts and Administered Territories).	2,196,933	2,041,534	1,857,519	1,575,943	17,609,672
Punjab	19,974,956	20,330,337	19,009,368	17,274,597	17,609,672
United Provinces of Agra and Oudh	47,182,944	47,692,277	46,905,512	44,149,959	42,002,004
Agra	34,624,040	34,859,109	34,254,588	32,762,127	30,780,961
Oudh	12,558,004	12,833,168	12,650,924	11,387,832	11,221,043

regular; but it is supplemented in many parts by water from the canals. The natural divisions which contain the coast districts of Orissa and north Madras, with a rainfall of 50 inches, has a relatively low mean density, but this is because it includes on the west a considerable hilly area, while on the east near the sea the ground is swampy and impregnated with salt. In the intermediate strip, between the littoral and the hills, the density is as great as in parts of the lower Gangetic Plain. Want of water is the main explanation of the comparatively sparse population in several more or less level tracts such as Gujarat, Rajputana East and Central India West, and the North-West dry area. In Assam there are extensive tracts of hill and jungle and sandy stretches in the strath of the Brahmaputra River, where permanent cultivation is out of question. The agricultural returns show that three-quarters of the whole area is cultivable but this simply means that crops of some kind can occasionally be grown. The proportion of the area fit for permanent cultivation must be less than half that shown in the returns.

TOWNS AND VILLAGES.

The definition of a town in the Indian census statistics includes every municipality; all Civil Lines not included within municipal limits; every cantonment; every other continuous collections of houses inhabited by not less than 5,000 persons, which may be treated as a town for census purposes. Only 9·5 per cent. of the population of India are found in towns as defined above, compared with 78·1 per cent. in England and Wales and 45·6 per cent. in Germany. Rather more than half the urban population of India is found in towns containing upwards of 20,000 inhabitants, about one-fifth in towns with from ten to twenty thousand, and the same proportion in those with from five to ten thousand; the remainder, about one-fifteenth, live in towns with less than five thousand. The tendency to urban aggregation is most marked in the west of India and least so in the north-east. The proportion of the urban to the total population in the main provinces ranges from 18 per cent. in Bombay to only 3 per cent. in Assam. The urban population of Upper India is much larger than it otherwise would be, because of the numerous old capitals which are found there. In the future the main factors will be the expansion of trade and industrial development.

Sex in Towns.—In respect of the distribution by sex, the urban population in India presents a striking contrast to that of European countries. In Europe the proportion of females is larger in towns than in the general population, but in India it is considerably smaller, and the number of females per thousand males is only 847, compared with 953 in the population as a whole. The reason is that in this country the great majority of the domestic servants, shop hands and factory employes are males. The disproportion is most marked in large trading and industrial centres where the number of immigrants is large. In Calcutta, for example, the foreign-born population contains only 357 females per thousand males.

Religion in Towns.—Of the Parsis no fewer than six out of every seven are resident in towns; of the Jains, the proportion is nearly one-third; and of the Christians more than one-fifth. There is a marked contrast between these proportions and those for Hindus and Mahomedans who form the bulk of the population. Of the Mahomedans less than one-eighth, and of the Hindus less than one-eleventh, reside in towns. In the case of the former the proportion rises to one-sixth if we exclude the figures for Bengal, where the majority of the Mahomedans are the descendants of local converts. Amongst the Hindus the higher castes have hitherto shown a greater predilection for town-life than the lower, but the disproportion is gradually disappearing; modern industrial developments are attracting the lower castes to towns in ever-increasing numbers.

Urban and Rural.—The proportion of the urban to the total population has fallen during the decade from 9·9 to 9·5 per cent. The main explanation of this is undoubtedly the fact that plague has been far more prevalent in towns than in rural areas. This scourge has now spread to all parts of the Empire except the east and south. At the time of the census an epidemic was raging in many towns, especially in those of the United Provinces, Central India and the Central Provinces and Berar, and a large number of the regular inhabitants had gone away. In addition, however, to driving people away, plague has been responsible in many towns for a terribly heavy mortality. It is impossible to make any estimate of the direct and indirect effects of plague on the growth of towns, but it is quite certain that they have been enormous.

Urban Tendencies.—We cannot draw any conclusions as to the tendency to urban aggregation from a comparison of the statistics of the present census with those of the previous one, when plague was still a new and more or less local visitation, but there can be no doubt that there is a growing tendency for people to congregate in towns of a certain kind. The introduction of machinery is rapidly causing the old cottage industries to be replaced by mills and factories; and these are necessarily located at those places where there are the best facilities for collecting the raw material and distributing the manufactured article. The jute industry is practically confined to the banks of the Hooghly near the port of Calcutta. Cotton mills are found chiefly in Western India and woollen and leather factories at Cawnpore and Delhi. The increasing trade of the country and the improvements in railway communications also encourage the growth of towns. Not only are the great sea ports attracting an ever-growing population, but various inland towns are benefiting from the same cause. The extent to which modern conditions of trade and industry are causing the growth of towns is obscured not only by plague, which is generally far more prevalent in towns than in rural areas, but also by the decay of old centres of population, which owed their importance to past political and economic conditions. Throughout India there are many former capitals of defunct dynasties whose population is steadily dwindling. During the last ten years, Mandalay, the last capital of the kings of Ava, has lost a quarter of its population.

GROWTH OF THE INDIAN POPULATION—*contd.*

States and Agencies	1911.	1901.	1891.	1881.	1872.
Assam State (Manipur)	346,222	284,465	....	221,070	....
Baluchistan States	420,291	428,640	....	....	.....
Baroda State	2,032,798	1,952,692	2,415,396	2,182,158	1,997,598
Bengal States	822,565	740,299	716,310	698,261	567,827
Bihar and Orissa States	3,945,209	3,314,474	3,028,018	2,410,611	1,723,900
Bombay States	7,411,675	6,908,559	8,081,950	6,937,893	6,797,970
Central India Agency	9,356,980	8,497,805	10,136,463	9,261,907	....
Central Provinces States	2,117,002	1,631,140	1,712,562	1,387,294	928,116
Hyderabad State	13,374,676	11,141,142	11,537,940	9,845,594	....
Kashmir State	3,158,126	2,905,578	2,543,952	....	....
Madras States	4,811,841	4,188,086	3,700,622	3,344,849	3,289,302
Mysore State	5,806,193	5,539,399	4,943,604	4,186,188	5,055,402
N.-W. F. Province (Agencies and Tribal areas)	1,622,094	83,962	....	....	....
Punjab States	4,212,794	4,424,398	4,263,280	3,861,683	....
Rajputana Agency	10,530,432	9,853,366	12,171,749	9,934,255	....
Sikkim State	87,920	59,014	30,458	....	....
United Provinces States	832,936	892,097	792,491	741,750	638,720

CITIES.

The general practice of statisticians is to treat as cities only those places which have a population of more than 100,000. According to this standard there are in India only 30 cities, with a population of 7,075,782, or 2.2 per cent. of the population. Here there is an extraordinary difference between the Indian conditions and those of Western countries. In England the cities contain 45 per cent. of the total population, in Germany 21, and in France 14 per cent. But even in these countries the growth of cities is comparatively recent. In 1871 England had only 27 cities with 9.5 million inhabitants and Germany only 8 with 2 millions. There are signs that in India the growth will be more rapid in the future than it has been. The population of cities has risen since 1872 by 64 per cent. and the net increase, comparing like with like, is 43 per cent. The most rapid growth during this period is shown by Rangoon which has trebled its population. Next comes Karachi with an increase of 168 per cent. and then Madura and Howrah with 158 and 113 per cent. respectively. Since 1901, two new places, Jubbulpore and Dacca, have entered the list of cities, while Baroda has disappeared from it. Eighteen cities have gained, and twelve have lost, population. Of the latter, a few like Mandalay are really decadent, but in most, such as Nagpur and Cawnpore, the loss was due wholly to the temporary influence of plague. The progressive cities are differentiated from those which are decadent by their large immigrant population. In Bombay, Calcutta and Howrah this exceeds 70 per cent. of the total and in Rangoon and Karachi it is close on 60 per cent. In Patna, Mandalay and Bareilly, on the other hand, it is barely 10 per cent.

Calcutta.—In speaking of Calcutta we may mean Calcutta proper, or the area administered by the Calcutta Municipal Corporation with the port, fort and canals, the population of which is 896,067, or this area plus the suburban municipalities of Cossipur-Chitpore, Manicktola and Garden Reach with 1,04,3307 inhabitants, or lastly Greater Calcutta, which also includes Howrah, with an aggregate population of 1,222,313. The suburban municipalities differ from Calcutta only in respect of their Municipal Government. From a structural point of view they cannot be distinguished. The buildings are continuous throughout, and there is nothing to show where one municipality begins and the other ends. A striking feature of the statistics is the large number of immigrants. Less than 29 per cent. of the inhabitants of Calcutta proper claim it has as their birthplace. The vast majority are immigrants, of whom 204,000 come from Bihar and Orissa and 90,000 from the United Provinces. Of the Bengal districts, the largest contributions are those from the 24 Parganas (88,000), Hooghly (48,000) and Midnapur (29,000). The volume of immigration is equally great in the suburbs and Howrah.

The first regular census of Calcutta proper taken in 1872 showed a population of 633,009. In 1881 there was practically no change, but in 1891 a gain of 11·4 per cent. was recorded. In 1901 here was a further increase of 24·3 per cent., but part of this was due to improved enumeration. At the present census the rate of increase in Calcutta proper has dropped to 5·7 per cent. The falling off is due largely to the growing tendency of the inhabitants to make their home in the suburbs or even further afield. The suburban municipalities have grown during the decade by 45·3 per cent.

Bombay—which has now a population of 979,445 was a petty town with about ten thousand inhabitants when it passed into the possession of the British in 1661. The population was estimated to be 100,000 in 1780, 180,000 in 1814 and 236,000 in 1836. At the first regular census in 1872 it had risen to 644,405, and nineteen years later, in 1891, it was 821,764. In the next decade plague, which first appeared in September 1896, caused a serious set back; and it is estimated that by 1901 this disease had already been responsible for 114,000 deaths. The census of that year showed a decrease of about 6 per cent., but this was not wholly due to deaths. At the time when the census was taken, a virulent epidemic was in progress, and large numbers of the permanent residents had sought safety in flight. A fresh enumeration taken in 1906 by the Health Department of the Municipality gave a population of 959,537. The number now returned exceeds that of 1901 by 26 per cent. but it is only 2 per cent. more than it was at the time of the local enumeration of 1906. It is said that the census of 1911 was taken at a time when many of the immigrants from neighbouring districts had gone to their permanent homes for the Holi holidays, and that many of the cotton mills had closed down temporarily owing to the prohibitive price of the raw material. Like other large trading and industrial centres, Bombay is peopled mainly by immigrants; and more than 80 per cent. of its inhabitants were born elsewhere. Most of them come from the neighbouring districts; more than one-fourth of the total number are from Ratnagiri, while four other districts together supply more than a third. There are 30,000 Goanese, most of whom are in domestic service. Of the immigrants from outside the province, some 50,000, chiefly mill hands, are from the United Provinces, and 12,000 mainly shopkeepers, from Rajputana. Of the immigrants from outside India the largest number (6,000) come from the United Kingdom.

Madras.—Unlike Calcutta and Bombay, Madras, which is handicapped by its distance from the coal-fields, has but few large industries. The indigenous handicrafts are decaying and their place is not being taken by factories of the modern type. Apart from its being the headquarters of the Local Government, Madras owes whatever importance it possesses to its position as a distributing centre. Of its total population (518,660), only one-third are immigrants, and of these only 12 per cent. have come from places beyond the limits of the Madras Presidency. The great majority are natives of the four districts in the immediate vicinity of the city.

The population grew fairly rapidly during the twenty years prior to 1901, but since then it has been almost stationary. There has been an increase of about one per cent. in the number of persons born in the city, but fewer of them

SUMMARISED GROWTH OF THE INDIAN POPULATION.

	1901 to 1911.	1891 to 1901.	1881 to 1891.	1872 to 1881.	Net variation in period 1872 to 1911. Increase (+). Decrease (—).
INDIA	+20,795,340	+7,046,385	+33,418,341	+47,733,970	+108,994,036
PROVINCES	+12,661,602	+10,365,104	+22,358,019	+13,719,382	+59,104,107
Ajmer-Merwara	+24,483	—65,446	+81,636	+64,391	+105,064
Andamans and Nicobars	+1,810	+9,040	+ 981	....	....
Assam	+871,757	+364,576	+569,510	+757,023	+2,562,866
Baluchistan	+32,306	....	....	....	....
Bengal	+3,341,600	+3,051,845	+2,772,904	+2,197,263	+11,363,612
Bihar and Orissa	+1,247,301	+366,226	+1,888,237	+4,501,838	+8,003,602
Bihar	+392,757	—221,326	+1,163,171	+2,682,740	+4,017,342
Orissa	+149,611	+315,915	+322,263	+740,308	+1,528,597
Chota Nagpur	+704,933	+271,637	+402,803	+1,078,290	+2,457,663
Bombay (Presidency)	+1,112,992	—318,821	+2,383,933	+193,176	+3,371,280
Bombay	+808,276	—654,526	+1,916,671	—32,887	+2,037,534
Sind	+302,525	+335,810	+458,043	+210,492	+1,306,870
Aden	+2,191	—105	+9,219	+15,571	+26,876
Burma	+1,624,593	+2,768,571	+3,985,282	+989,623	9,368,069
Central Provinces and Berar	+1,944,856	—1,077,520	+1,105,609	+1,992,095	+3,965,040
Central Provinces	+1,641,710	—934,045	+880,791	+1,547,076	+3,135,532
Berar	+303,146	—143,475	+224,818	+445,019	+829,508
Coorg	—5,631	+7,552	—5,247	+9,990	+6,664
Madras	+3,175,750	+2,585,226	+4,803,274	—389,468	+10,174,782
North-West Frontier Province (Districts and Administered Territories).	+155,399	+184,015	+281,576	+1,240,868	+4,562,217
Punjab	—355,381	+1,320,969	+1,734,771		
United Provinces of Agra and Oudh	—510,233	+786,765	+2,755,553	+2,147,955	+5,180,040
Agra	—235,069	+604,521	+1,492,461	+1,981,166	+3,843,079
Oudh	—275,164	+182,244	+1,263,092	+166,789	+1,336,961

have been enumerated within the city limits. As compared with 1901 the net gain due to migration is less than 9,000. It is possible that the great demand for labour in Burma, where wages are very high, has attracted many of the labouring classes who would otherwise have sought their living in Madras.

Hyderabad.—Next to the three Presidency towns, the largest city in India is Hyderabad, the capital of the Nizam's Dominions. Its population is shown in the local Census Report as 500,623. Hyderabad has hitherto made very little industrial progress, and less than a quarter of its population is drawn from outside.

HOUSES AND FAMILIES.

Generally speaking it may be said that the labouring classes in India live in one, or at the most two, single room huts. The home of a well-to-do peasant consists of a public sitting room and a cook room and several apartments which are arranged round and open on to a courtyard. In spite of the joint family system the number of houses corresponds very closely to the number of families in the European sense. The total number of houses is 63·7 million, and there are 64·6 million married females aged 15 and over. Except amongst the higher castes who form but a small fraction of the total population the joint family system is not nearly so common as is frequently supposed. Where it is in vogue, there is often a strong disruptive tendency. In the towns and cities, owing to the high rents, the unit for all below the middle class is the room, not the house.

	Average population per house
1881	5·8
1891	5·4
1901	5·2
1911	4·9

MOVEMENT OF THE POPULATION.

According to the census returns, the total population of India has increased by 7·1 per cent. during the last decade, and by 52·9 per cent. since 1872, but the real gain since the latter date is very much less than this. Large tracts of country, including the Central India and Rajputana Agencies, Hyderabad and the Punjab States, which were omitted from the census returns of 1872, were included in those of 1881. In 1891 the greater part of Upper Burma and Kashmir and several smaller units were enumerated for the first time. In 1901 the most important additions were a portion of Upper Burma and the greater part of Baluchistan. In 1911 the Agencies and tribal areas in the North-West Frontier Province, together with a few smaller areas, were included within the scope of the enumeration. The real increase in the population in the last 39 years is estimated at about 50 millions, or 19 per cent. This is less than half the increase which has taken place in the same period amongst the Teutonic nations of Europe, but it considerably exceeds that of the Latin nations. In France the population has grown by less than 7 per cent. since 1870, but this is because of its exceptionally low birth-rate. In India the birth-rate is far higher than in any European country; and it is the heavy mortality especially amongst infants, which checks the rate of increase.

Famine and Disease.—In addition to the causes which ordinarily govern the movement of the population, India is subject to two special factors—famine and epidemic disease. The decade preceding the census of 1911 was free from widespread famines such as those of the preceding ten years. In 1907 there was a partial failure of the monsoon which was felt over a wide area, extending from Bihar to the Punjab and Bombay, and causing actual famine in the United Provinces and in a few districts elsewhere. Prices ruled high in most years and there was an extension of special crops, such as jute and cotton, which are more profitable to the cultivator than food grains. It was on the whole a period of moderate agricultural prosperity. From the point of view of public health, the censal period would have been an average one, but for the ravages of plague. Breaking out in Bombay in 1896, it has by March 1901 caused a recorded mortality of half a million. Since then it has continued its ravages, especially in Bombay and Upper India. The mortality from it rose from about a quarter of a million in 1901 to 1·3 millions in 1907. It fell below a quarter of a million in each of the next two years, but in 1910 it exceeded half a million. The total number of deaths from plague during the decade was nearly 6·5 millions of which over one-third occurred in the Punjab and two-fifths in the United Provinces and Bombay, taken together. The disease fortunately has failed to establish itself in Bengal, Assam, and on the East Coast and in the extreme south of the Peninsula. This however is only the recorded mortality; in time of epidemic the reporting agency breaks down and large numbers of deaths escape registration. Plague attacks women more than men, and people in the prime of life more than the young and old. If plague is omitted, and it is assumed that the mortality of the decade would otherwise have remained normal, the population of the census of 1911 would have been greater than it was by at least 6·5 millions. In other words, the population would have increased by 9·3 instead of 7·1 per cent.

General Conclusions.—The most noticeable feature is the continuous rapid growth in Burma. Lower Burma has grown by 135 per cent. since 1872 and the whole Province including Upper Burma, which was annexed in 1886, by 87 per cent. since 1891. In Assam including Manipur the increase since 1872 amounts to 70 and in the Central Provinces and Berar to 47 per cent. In the other main provinces the rate of growth has been much slower. In some provinces, such as Burma, Assam and Bengal there has been continuous progress but others, at some time or another, have sustained a set-back In the larger provinces at least, the internal variations are also frequently considerable. In Bengal one district has at the present time a smaller population than it had in 1872, while four others have more than doubled their population since that date.

In British territory there has been a gain of 9·1 per cent. over about nine-tenths of the area,

SUMMARISED GROWTH OF THE INDIAN POPULATION—*contd.*

	1901 to 1911.	1891 to 1901.	1881 to 1891.	1872 to 1881.	Net variation in period 1872 to 1911. increase (+). Decrease (—).
STATES AND AGENCIES	+8,133,738	—3,318,719	+11,060,322	+34,014,588	+49,889,929
Assam State (Manipur)	+61,757	....	....	....	....
Baluchistan States	—8,349	....	....	....	....
Baroda State	+80,106	—462,704	+233,238	+184,560	+35,200
Bengal States	+82,266	+23,989	+18,049	+130,434	+254,738
Bihar and Orissa States	+630,735	+286,456	+617,407	+686,711	+2,221,309
Bombay States	+503,116	—1,173,391	+1,144,057	+139,923	+613,705
Central India Agency	+859,175	—1,638,598	+874,496	....	....
Central Provinces States	+485,862	—81,422	+325,268	+459,178	+1,188,886
Hyderabad State	+2,233,534	—395,898	+1,691,446	....	....
Kashmir State	+252,548	+361,626	....	....	....
Madras States	+623,755	+487,464	+355,773	+55,457	+1,522,449
Mysore State	+266,794	+595,795	+757,416	—869,214	+750,791
N.-W. F. Province (Agencies and Tribal areas)	+1,538,132	....	....	....	....
Punjab States	—211,604	+161,118	+401,597	....	....
Rajputana Agency	+677,066	—2,318,383	+2,227,494	....	....
Sikkim State	+28,906	+28,556	....	....	....
United Provinces States	+29,939	+9,606	+50,741	+102,930	+193,316

with three quarters of the total population, and a loss of 5·3 per cent. in the remaining one-tenth of the area and one-fourth of the population. The contrast in different parts of the Native States is still more striking. The net increase of 10·3 per cent. is the outcome of a gain of 14·3 per cent. in four-fifths of the total area and population, coupled with a loss of 6·2 per cent. elsewhere. The relatively greater net increase in the Native States as compared with British territory is explained by the fact that many of the States suffered severely from famine in the previous decade when they sustained a net loss of 5 per cent., while British territory gained 4·7 per cent. Apart from this, in ordinary circumstances a comparatively high rate of increase is to be expected in the Native States, as they are, on the whole, more undeveloped than British territory, and contain a much larger proportion of cultivable waste land. The net increase in India as a whole during the last decade is the resultant of a gain of 10·3 per cent. in an area of 1,517,000 square miles, with a population of 245 millions and a present density of 162 to the square mile, and a loss of 5·5 per cent. in an area of 218,000 square miles with a population of 68 millions and a density of 312 to the square mile.

MIGRATION.

In India there are two currents of migration—minor and major. The chief of the minor movements is the custom, almost universal amongst Hindus, whereby parents seek wives for their sons in a different village from their own. Of the 26·5 million natives of India who were enumerated in a district other than that in which they were born, 16·5 millions, or 62 per cent. were born in a district adjoining that in which they were enumerated. The major currents of migration are governed by economic conditions. The most noticeable movements are the large streams of emigration from Bihar and Orissa, Madras, the United Provinces and Rajputana, and of immigration into Bengal, Assam and Burma. Owing to its fertile soil, Bengal is able to support practically the whole of its dense indigenous population by agriculture. It is necessary therefore to man the jute mills by imported labour, as also the tea gardens of Darjiling and Jalpaiguri and to draw the general labour supply from outside. In Bengal the net excess of immigrants over emigrants is close on 1,400,000. Of these about 236,000 are Natives of a district in Bihar and Orissa, or Assam, contiguous to the Bengal district in which they were enumerated. Assam and Burma are sparsely populated and the land available for cultivation being ample, very few of the indigenous inhabitants find it necessary to work for hire. The tea gardens of Assam and the rice mills and oil wells of Burma have to obtain their coolies elsewhere. In Assam 12·5 per cent. and in Burma 5 per cent. of the population are immigrants. On an average 51,000 labourers and dependants go each year to the tea gardens of Assam. In Burma, Madras supplies labourers for the rice-milling, oil and other industries, whilst many coolies flock into the province from Chittagong, chiefly for the rice harvest. The net loss to Bihar and Orissa on account of migration is about 1·5 millions. The United Provinces sustain a net loss of about 800,000 from migration, chiefly in the direction of Bengal. Madras being very backward from an industrial point of view, there is no great local demand for labour. At the same time there is an exceptionally large population of the "untouchable" castes, who have no scruples about seeking their livelihood oversea. It provides Ceylon with labour for its plantations, Burma with labour for its industries, and the Federated Malay States with labour for their rubber plantations. The enterprising Marwari traders of Rajputana have penetrated to all parts of India and are to be found in very important bazars throughout Bengal and even in Assam. Bombay is industrially more advanced than Bengal, but as its soil is less productive there is a large local supply of labourers, chiefly from the southern coast strip called the Konkan. The United Provinces give more than four times as many labourers to Bengal as to Bombay. As for the migration between British India and Native territory, it involves a loss of 135,000 to the Native States.

Asiatic Immigration.—Of the 504,000 persons born in other Asiatic countries who were resident in India at the time of the census, more than half were natives of Nepal. Of the 92,000 immigrants from Afghanistan all but 11,000 were enumerated in Northern India. The rest were cold weather visitors who travel about the country peddling piece-goods and other articles of clothing. These Cabuli pedlars cause great trouble in Bengal by their truculence. The number of Chinese is 80,000. Most of these are found in Burma, but the Chinaman is making his way into Bengal, where he is appreciated as a shoemaker and carpenter. From Arabia come 23,000 immigrants, chiefly to Bombay.

Non-Asiatic Immigration.—The total number of immigrants from countries outside Asia is 146,265. Of these 131,968 come from Europe. The United Kingdom sends 122,919; Germany comes next with only 1,860 and then France with 1,478. As compared with 1901 there is an increase of about 26,000 in the number of immigrants from the United Kingdom. Of the British-born 77,626 were serving in the army as compared with 60,965 at the time of the previous census, when a strong contingent had been sent from India to reinforce the British garrison in South Africa. The rest of the increase is accounted for by the industrial development which has taken place, the extension of railways, and the growing extent to which Englishmen in India marry. The number of females born in the British Islands and enumerated in India has risen during the decade from 14,663 to 19,494. The figures for other European countries do not call for any special comment.

Emigration from India.—The Indian census statistics naturally tell us nothing of the emigration from India to other countries. This emigration is of two kinds, the movement across the border which separates India from contiguous countries, such as China, Nepal, Afghanistan and Persia, much of which is of the casual type, and emigration to distant countries. No statistics are available regarding the emigration from India to the countries on its borders. There is probably very little movement from Burma into China

VARIATION IN POPULATION OF THE 30 CHIEF TOWNS.

	1911.	1901.	1891.	1881.	1872.
CALCUTTA AND FORT *	896,067	847,796	682,305	612,307	633,009
BOMBAY	979,445	776,006	821,764	773,196	644,405
MADRAS AND CANTONMENT	518,660	509,346	452,518	405,848	397,552
Agra and Cantonment	185,449	188,022	168,662	160,203	149,008
Ahmedabad and Cantonment	216,777	185,889	148,412	127,621	119,672
Allahabad and Cantonment	171,697	172,032	175,246	160,118	143,693
Amritsar and Cantonment	152,756	162,429	136,766	151,896	135,813
Bangalore Civil and Military Station †	100,834	89,599	100,081	93,540	81,810
Bareilly and Cantonment	129,462	133,167	122,837	115,138	104,533
Benares and Cantonment	203,804	213,079	223,375	218,573	178,300
Cawnpore and Cantonment	178,557	202,797	194,048	155,369	125,877
Dacca	108,551	89,733	81,585	78,360	68,595
Delhi and Cantonment	232,837	208,575	192,579	173,393	154,417
Howrah	179,006	157,594	116,606	90,813	84,069
Hyderabad and Cantonment	500,623	448,466	415,039	367,417	...
Jaipur	137,098	160,167	158,787	142,578	...
Jubbulpore and Cantonment	100,651	90,533	84,682	76,023	55,469
Karachi and Cantonment	151,903	116,663	105,199	73,560	56,753
Lahore and Cantonment	228,687	202,964	176,854	157,287	125,413
Lucknow and Cantonment	259,798	264,049	273,028	261,303	284,779
Madura	134,130	105,984	87,428	73,807	51,987
Mandalay and Cantonment	138,299	183,816	188,815	...	...
Meerut and Cantonment	116,227	118,129	119,390	99,565	81,386
Nagpur	101,415	127,734	117,014	98,299	84,441
Patna	136,153	134,785	165,192	170,654	158,900
Poona and Cantonment	158,856	153,320	161,390	129,751	118,886
Rangoon and Cantonment	293,316	245,430	182,080	134,176	98,745
Srinagar and Cantonment	126,344	122,618	118,960	...	...
Surat and Cantonment	114,868	119,306	109,229	109,844	107,855
Trichinopoly and Cantonment	123,512	104,721	100,609	84,449	76,530

* The above figures for Calcutta exclude the population of Cossipore-Chitpur, Manicktola and Garden Reach. These places have a separate Municipal administration, but for all practical purposes they form an integral part of Calcutta. So also does Howrah except that it lies on the opposite bank of the Hoogly. If the first-mentioned Municipalities be added, the population of Calcutta rises to 1,043,307. If Howrah also be included, it comes to 1,222,313.

† Bangalore City and Bangalore Civil and Military Station are structurally a single unit, but for the purpose of the census they have been treated as separate places.

but, on the other hand, it is believed that the emigration into the somewhat sparsely peopled Nepal terai from some of the adjacent British districts, where the population is much congested, exceeds the countervailing immigration. Very few people go from British territory to settle permanently in Afghanistan or Persia, but at the time when the last census was taken owing to drought in Baluchistan, a considerable number of Nomad Brahuis from Chagai, and of Baloch from Mekran had passed over temporarily into Afghanistan and Persia. At a rough guess the number of emigrants across the Indian Frontier may be taken to be about a fifth of a million.

Emigration to Distant Countries.—Of the emigrants to distant countries a certain number find their way to French or Dutch Colonies, such as Surinam, Martinique and Guadeloupe. But the majority go to other parts of the British Empire. The total number of emigrants from India to other parts of the British Empire slightly exceeds a million, of whom about two-thirds are males; more than four-fifths of the aggregate are Hindus and only one-tenth are Mahomedans. Of the total number, about 474,000 were enumerated in Ceylon, 231,000 in the Straits Settlements and the Malay States, 88,000 in British Guiana, 73,000 in Natal, 51,000 in Trinidad, 35,000 in Mauritius, 29,000 in Fiji and 8,000 each in Jamaica and Zanzibar. About one-fifth of these emigrants failed to specify their province of birth; of the remainder no less than 693,000 or 85 per cent. were from Madras, 32,000 from Bengal, about 20,000 each from the United Provinces and Bombay, 16,000 from Bihar and Orissa, 13,000 from the Punjab and 8,000 from the Mysore State. The number who emigrated from other parts of India was inconsiderable. Most of these emigrants to the colonies went as ordinary labourers in sugar, tea, coffee, rubber and other plantations, but a large number of those from Bombay and Bengal are lascars on ships, while many of the natives of the Punjab are employed in the army or military police.

Ceylon.—The movement to Ceylon is of long-standing. Owing to the rapid expansion of tea cultivation, the number of natives of India enumerated in that Island increased by 65 per cent. in the decade ending in 1901. Since then there has been a further increase of nearly 10 per cent. chiefly on account of the new rubber plantations. The great majority of these emigrants are from the southern districts of Madras. Mysore sends about 8,000, Travancore 7,000 and Cochin and Bombay 3,000 each. Most of them are temporary emigrants, who return after a time to their homes in Southern India. The total number of Tamils enumerated in Ceylon exceeds a million, but about half of them have been domiciled in the Island for many centuries and barely 100,000 are the offspring of recent settlers.

Malaya.—The emigration to the Straits Settlements and the Malay States is of quite recent growth, and is due almost entirely to the demand for labour on the rubber plantations. Most of the emigrants are temporary settlers, who return to their homes when they have saved a little money; and the total number of Indians enumerated there exceeds by only 12 per cent. the number who returned to India as their birthplace. Almost four-fifths of the total number are males. Here also Madras is the principal source of supply, the Punjab (8,754) being the only other province which sends an appreciable number.

South Africa.—In Natal, there has been a great deal of permanent settlement; and of the total number of Indians enumerated there, nearly half were born in the colony. Many of these have forgotten their native language and now talk only English. But it is in Mauritius that the process of colonisation has made most headway. The introduction of Indian coolies to work the sugar plantations dates from the emancipation of the slaves, three quarters of a century ago: and from that time onwards many of the coolies who have gone there have made the island their permanent home. Though it now contains only 35,000 persons who were born in India, the total number of Indians is 258,000, or abo ut 70 per cent. of the whole population. A lar ge part of the island is now owned by Indians, and they are dominant in commercial, agricultural and domestic callings.

RELIGIONS.

India is a land of many religions. All the great religious faiths of mankind are represented in its population by communities, whose origin carries us back to the early history of their respective creeds. Hinduism and its offshoots, Buddhism and Jainism, are autochthonous. The Jews of Cochin have traditions which carry back their arrival on the coast to the time of their escape from servitude under Cyrus in the sixth century B. C. The Syrian Christians of Malabar ascribe the introduction of Christianity and the establishment of their original Church to the Apostle St. Thomas, in the year 52 A.D. Nearly two centuries before the followers of Mahomed obtained a footing in India as conquerors, a peaceful trading colony of Arabs had settled on the Malabar coast. The Parsi settlement in Gujarat dates from about the same period. These facts are recalled here because not only Europeans, but even educated Indians, speak as if the first foreign settlement in India was that which followed the Mahomedan conquest, and that Christianity was first brought to the country by the Portuguese. They also dispose of another erroneous idea that up to the time of the Mahomedan conquest, Hinduism absorbed all the foreign elements which found their way into the country. No doubt Greeks, Bactrians and Scythians were so absorbed into the structure of Hinduism, but the fact that the Jews, the Syrian Christians and the Parsis have remained distinct from Hinduism, shows that this was not the case universally. If we may hazard a conjecture, it would seem that the ancient Hindu policy towards immigrants who came by land differed from that observed in the case of immigrants by sea. The Indo-Aryan himself entered the country through the mountain passes in the North-West, and knew something of the land which lay beyond. But the sea was always something of a mystery and a terror to him, and those

STATISTICS OF RELIGIONS.

Religion	India.	British Provinces.	Native States.
INDIA	315,156,396	244,267,542	70,888,854
Hindu	217,586,892	163,621,431	53,965,461
Brahmanic	217,337,943	163,381,380	53,956,563
Arya	243,445	234,841	8,604
Brahmo	5,504	5,210	294
Sikh	3,014,466	2,171,908	842,558
Jain	1,248,182	458,578	789,604
Buddhist	10,721,453	10,644,409	77,044
Zoroastrian (Parsi)	100,096	86,155	13,941
Musalman	66,647,299	57,423,889	9,223,410
Christian	3,876,203	2,492,284	1,383,919
Jew	20,980	18,524	2,456
Animistic	10,295,168	7,348,024	2,947,144
Minor Religions and Religion not returned	37,101	2,340	34,761
Not enumerated by Religion	1,608,556	....	1,608,556

POPULATION ACCORDING TO RELIGION AND EDUCATION (CENSUS OF 1911).

Religions.	Total Population.	Illiterate.	Literate.	Literate in English.
Males.				
Hindu	110,865,731	99,642,597	11,223,134	1,013,596
Sikh	1,734,773	1,550,610	184,163	11,490
Jain	643,553	324,968	318,585	13,030
Buddhist	5,286 142	3,151,761	2,134,381	21,767
Parsi	51,123	11,128	39,995	25,384
Muhammadan	34,709,365	32,319,599	2,389,766	176,051
Christian	2,010,724	1,422,154	588,570	252,591
Animistic	5,088,241	5,084,408	53,833	1,521
Minor and Unspecified	28,818	22,480	6,388	2,981
Total Males	160,418,470	143,479,655	16,938,815	1,518,361
Females.				
Hindu	106,720,714	105,905,904	814,810	23,659
Sikh	1,279,667	1,262,387	17,280	238
Jain	604,629	580,509	24,120	209
Buddhist	5,435,086	5,117,748	317,338	1,383
Parsi	48,973	17,755	31,218	8,347
Muhammadan	31,883,812	31,746,005	137,807	3,940
Christian	1,865,472	1,613,177	252,295	112,643
Animistic	5,129,303	5,126,316	2,987	74
Minor and Unspecified	29,263	26,355	2,908	1,533
Total Females	152,996,919	151,806,156	1,600,763	152,026
Total Population	313,415,389	294,875,811	18,539,578	1,670,387

who came from beyond the sea were looked upon as beings of a different clay. They were treated hospitably, and in course of time they assimilated much of the influences of their Hindu environment. But they remained all the same separate communities, and no attempt was made to incorporate them in the great mass of Hinduism. The prohibition of sea voyage to members of the higher castes is another proof of the peculiar prejudice which ancient Indians cherished against inhabitants of countries divided from India by intervening seas.

Origin of Hinduism.—We have spoken alone of Hinduism as being autochthonous. The opinion generally held is that the ancestors of the Vedic Indians were immigrants from Central Asia. An Indian scholar of some repute has recently endeavoured to show that the received opinion is not borne out by the evidence available in the ancient literatures of India. Whatever may be the value attaching to his contention that the Vedic Indians were not immigrants or descendants of immigrants, but only a section of the indigenous population addicted to the cult of fire-worship, it is true, as he says, that there is no expression in the Vedas of a longing, lingering remembrance of a foreign homeland, such as one might expect to find in the literature of an immigrant race. This is all the more remarkable as an intense attachment to the land they lived in is manifest in all their compositions. A Sanskrit couplet in which the names of the seven great rivers of India, the Ganges, the Jumna, the Godavari, the Saraswati, the Nerbudda, the Indus and the Cauvery, are strung together in pious praise, is recited daily by millions of Hindus at their daily devotions, and helps to keep them in mind of the sanctity of the Indian Continent in Hindu eyes. If the ancient Hindus were immigrants, they not only took exceptional care to blot out all memories of the land from which they came from their own minds, but they also strove by every means in their power to bind the reverence and love of their posterity to India as the land *par excellence* of religion and morality, so much so that the name Hindu, in the orthodox acceptance of the term, is not applicable to anyone who is not born in India. If the ancestors of the Hindus were foreigners in India, they must have set themselves, as a matter of deliberate policy, to intertwine the deepest affections and the highest aspirations of their race with the land in which they had settled, to the entire exclusion of the land whence they had come.

Evolution of Hinduism.—Following from the theory that the ancestors of the Hindus were immigrants from Central Asia, is the explanation generally given of the varieties of religious beliefs and social practices to be found within the pale of Hinduism. Hinduism, it is the common idea, was originally a pure and simple creed which has had to compromise with the Animism of the population, amongst whom it spread, by accepting several of its godlings and superstitions. The greatest obstacle in the way of this explanation is that there is no evidence whatsoever of any organised missionary activity among the Hindus at any time. The immense distances and the absence of means of communication, would of themselves have made such activity difficult. Moreover, a compromise implies selection and rejection and the existence of some agency entrusted with the duty of selection. As a fact, however, we find that Hinduism has exercised very little selection, and that it covers practically all the beliefs and customs which prevail amongst the tribes who are included within its pale. Such a state of things is more consonant with the view that the purer forms of Hinduism are highly evolved stages of the cruder forms which are still observed by the less educated and prosperous sections of the community. This view, namely, that the higher forms of Hindu'sm are evolved from lower ones, rather than that the latter are corruptions of the former, gains support from what is now generally accepted as being the true explanation of the origin of certain social customs. Twenty years ago, it was generally held that the custom of child marriages, for instance, was of sacerdotal origin and was most largely prevalent amongst the higher castes from whom it spread to the lower. Recently, however, it has been proved that child marriages are prevalent far more largely and in a far grosser form amongst the lowest castes than amongst the higher castes, and that amongst the latter, it is a survival from the times when the caste system was less rigid and intermarriages, that is to say, the taking of wives by the higher castes from the lower, were common. It may be added that the two most characteristic beliefs of Hinduism, namely, that in the transmigration of souls and in the law of *Karma* or retribution, are held with, if anything, more tenacity by the lower than by the higher castes.

Scope of Hinduism.—From this point of view, the varying beliefs and customs which go under the name of Hindu'sm not only offer no difficulties, but furnish the right clue to the understanding of this unique socio-religious system. They explain why the term "religion" as applied to Hinduism does not adequately express its scope and method. Hinduism has no settled creeds which are obligatory on every Hindu. It enforces no fixed and uniform moral standards on the innumerable sects and castes which bear its name. It extends its suffrages to monogamous, polygamous and even polyandrous unions between the sexes and, in the case of the so-called *devadasis*, countenances a life of open irregularity. An Indian newspaper recently instituted an interesting discussion on the question "Who is a Hindu." An eminent Hindu lawyer, who subsequently rose to be a judge of one of the Indian High Courts, laid down that a Hindu was one to whom the Indian Courts would apply the Hindu law. The learned lawyer, however, forgot that there are Mahomedan castes which follow the Hindu law in regard to the inheritance of and succession to property.

And yet, though Hinduism refuses to conform to almost every one of the ideas which we usually associate with the term "religion," it is impossible to deny that it occupies a unique and highly important place amongst the religious systems of the world. The reason why it does not fit into our definition of religion is that it represents a fundamentally different line of evolution in the history of religious

OCCUPATIONS OF THE INDIAN PEOPLES.

INDIA	313,470,014
A.—PRODUCTION OF RAW MATERIALS	227,089,092
I.—Exploitation of the Surface of the Earth	226,559,483
Pasture and agriculture	224,695,900
(*a*) Ordinary cultivation	216,787,137
(*b*) Growing of special products and market gardening	2,012,503
(*c*) Forestry	672,093
(*d*) Raising of farm stock	5,176,104
(*e*) Raising of small animals	48,063
Fishing and hunting	1,854,583
II.—Extraction of Minerals	529,609
Mines	375,927
Quarries of hard rocks	75,424
Salt, etc.	78,258
B.—PREPARATION AND SUPPLY OF MATERIAL SUBSTANCES	58,191,121
III.—Industry	35,323,041
Textiles	8,306,501
Hides, skins and hard materials from the animal kingdom	698,741
Wood	3,799,892
Metals	1,861,445
Ceramics	2,240,210
Chemical products properly so called, and analogous	1,241,587
Food industries	3,711,675
Industries of dress and the toilet	7,750,609
Furniture industries	89,268
Building industries	2,062,493
Construction of means of transport	66,056
Production and transmission of physical forces (heat, light, electricity, motive power, etc.).	14,384
Industries of luxury and those pertaining to literature and to arts and sciences.	2,141,665
Industries concerned with refuse matter	1,388,515
IV.—Transport	5,028,900
Transport by water	982,766
Transport by road	2,781,933
Transport by rail	1,062,493
Post Office, telegraph and telephone services	201,781
V.—Trade	17,839,102
Banks, establishments of credit, exchange and insurance	1,220,187
Brokerage, commission and export	240,858
Trade in textiles	1,277,469
Trade in skins, leather and furs	296,712
Trade in wood	224,838
Trade in metals	59,766
Trade in pottery	101,981
Trade in chemical products	171,927
Hotels, cafes, restaurants, etc.	719,052
Other trade in food stuffs	9,478,868
Trade in clothing and toilet articles	306,701
Trade in furniture	173,413

thought. In other races the line of evolution was from polytheism to monotheism, but in India it was from polytheism to the higher pantheism. Contrasting the development of the Judaic idea of God with that of the Hindus, Dr. Harold Haffding observes "With the Hindus there was no God who claimed sole sway; they went back to the power which makes all gods what they are, to the inner aspirations and needs which find vent for themselves in prayer and sacrifice. Following an extremely remarkable line of thought that which drives men to worship gods was itself regarded as the true divine power. Brahma meant originally the magical, creative word of prayer, but it afterwards came to denote the principle of existence itself, so that we have a transition from the idea of motion towards to that of its goal, from prayer to the object addressed in prayer." The Indian philosopher saw the whole universe transfused and overspread with Deity. He perceived how evil was being perpetually transformed to good in the cosmic process spreading out before the poet and the philosopher, endless and timeless, to whom the evil and the good seemed but different stages in a great common process of which the secret was known only to the Supreme Being. No European writer has caught the innermost essence of the Hindu philosopher's idea of the Supreme, so faithfully, and expressed it so felicitously as Sir Edwin Arnold in his "Light of Asia."

> Before beginning, and without an end,
> As space eternal and as surety sure,
> Is fixed a Power divine which moves to good,
>
> Only its laws endure.
> It is not marred nor stayed in any use,
> All liketh it; the sweet white milk it brings
> To mothers' breasts, it brings the white drops too,
>
> Wherewith the young snake stings.
> It slayeth and it saveth, nowise moved
> Except unto the working out of doom;
> Its threads are Love and Life; Death and Pain
>
> The shuttles of its loom.
> It maketh and unmaketh, mending all;
> What it hath wrought is better than had been;
>
> Slow grows the splendid pattern that it plans
>
> Its wistful hands between.

The ethical values of Hinduism are not different from those of other great religions. Like them it attaches little importance to the qualities which make for wordly success, and most importance to self-sacrifice, humility and kindliness to all. Only its methods differ. On the whole, however, the Hindu socio-religious scheme, owing to its tendency to make the individual human being a passive instrument in the hands of a Higher Power instead of an active co-operator with it, has favoured stability at the expense of progress.

Hindu sects.—Hinduism is made up of many sects and cults. It is usual to speak of Hinduism as it was before Buddhism, as a single creed, but this is because the literature that has come down to us is the literature of the sect that came to supersede all others. But even in it, we can, by reading between the lines, discover the existence of rival sects. Even the Vedas themselves are the literature probably of one of several sects which happened to be gifted with a talent for letters. The rapid multiplication of sects, however, was undoubtedly encouraged by the introduction of idol worship in imitation of the practice of decadent Buddhism. Hindu religious philosophers recognised three ways of salvation, namely, the way of knowledge, the way of faith and the way of service. Every sect of Hinduism recognises the value of all these three ways, but it differs as to the relative importance to be attached to each. The sect of the great philosopher, Sankaracharya, who maintained that the Supreme Being was the only Reality and that all the phenomenal universe was Maya or illusion, and that salvation came from the realisation of this fact, did not discard faith and service altogether, but only gave these a subordinate position in his scheme of religion. Ramanuja, Madhva and Vallabhacharya who followed him and, in more or less degree, refuted his doctrine of the non-reality of the phenomenal universe, laid more stress on faith and service than on knowledge, but they did not discard the path of knowledge altogether. It should be mentioned here that it has been the great misfortune of Hinduism that the path of service has come to mean the path not of altruistic service to mankind but the path of service conceived in a ceremonial sense to priests, religious recluses and mendicants and to idols. It is the great aim of the modern religious reform movements such as the Arya Samaj and the Brahma Samaj to rescue the path of service from this spurious interpretation and to make altruistic social service an integral part of religion. The question of sect, however, does not play a very important part in Hinduism. Except in Southern and to a much smaller extent, in Western India, the great mass of the Hindus are not sectaries. In Southern India, the Vaishnavas and Madhvas will, on no account, worship Shiva or visit a temple dedicated to him. The Lingayaths are a Shiva sect found in the Karnatak districts of the Bombay and Madras Presidencies, and in Mysore, and they have an invincible repugnance to the worship of Vishnu. But these are exceptional instances. But so far as the bulk of the Hindus are concerned, they resort to the nearest shrine whether it be dedicated to Shiva or Vishnu. The attitude of Hinduism to other religions is that they are each of them the most suitable path to salvation for the people who are born in them—that they are all several roads which lead to Heaven. For this reason Hinduism has never been a proselytising religion. This has proved a disadvantage to it face to face with such religions as Mahomedanism and Christianity which not only admit converts, but are actively engaged in seeking them. The proportion of Hindus to the total population has steadily diminished during the last forty years, partly owing to conversions to other religions particularly from amongst the lower classes. Conversions from among members of the higher and literate classes have practically ceased.

Hinduism.—The Hindus number 217,586,892 or 69·4 per cent. of the total population of

OCCUPATIONS OF THE INDIAN PEOPLES—*contd.*

V.—Trade—contd.	
Trade in building materials	84,613
Trade in means of transport	239,396
Trade in fuel	524,962
Trade in articles of luxury and those pertaining to letters and the arts and sciences.	522,180
Trade in refuse matter	3,695
Trade of other sorts	2,192,534
C.—PUBLIC ADMINISTRATIONS AND LIBERAL ARTS	10,912,123
VI.—Public Force	2,398,586
Army	665,278
Navy	4,640
Police	1,728,668
VII.—Public Administration	2,648,005
VIII.—Professions and Liberal Arts	5,325,357
Religion	2,769,489
Law	302,408
Medicine	626,900
Instruction	674,393
Letters and arts and sciences	951,167
IX.—Persons living principally on their Income	540,175
D.—MISCELLANEOUS	17,286,678
X.—Domestic Service	4,599,080
XI.—Insufficiently described Occupations	9,236,210
XII.—Unproductive	3,451,381
Inmates of jails, asylums and hospitals	132,610
Beggars, vagrants and prostitutes	3,318,771

DISTRIBUTION OF THE POPULATION.

	India.	British Provinces.	Native States.
1	2	3	4
Area in square miles	1,802,657	1,093,074	709,583
Number of Towns and Villages	722,495	538,809	183,686
(*a*) Towns	2,153	1,452	701
(*b*) Villages	720,342	537,357	182,985
Number of Occupied Houses	63,710,179	49,140,947	14,569,232
(*a*) In Towns	6,037,456	4,409,121	1,628,335
(*b*) In Villages	57,672,723	44,731,826	12,940,897
Total Population	315,156,396	244,267,542	70,888,854
(*a*) In Towns	29,748,228	22,817,715	6,930,513
(*b*) In Villages	285,408,168	221,449,827	63,958,341
Males	161,338,935	124,873,691	36,465,244
(*a*) In Towns	16,108,304	12,525,830	3,582,474
(*b*) In Villages	145,230,631	112,347,861	32,882,770
Females	153,817,461	119,393,851	34,423,610
(*a*) In Towns	13,639,924	10,291,885	3,348,039
(*b*) In Villages	140,177,537	109,101,966	31,075,571

India. Buddhists and Jains together number 11,969,635. Thus 229,556,527 or about 73 per cent. of the Indian people depend for their spiritual sustenance on Hinduism and its offshoots.

The Buddhist population is mostly Burmese, Buddhism having ceased a thousand years ago to count as a leading religion in the land of its birth. Several reasons are usually given to account for the hostility of Hinduism to Buddhism, such as that Buddha denied the authority of the Vedas and the existence of God and of the human soul. Jainism did all this, and yet Jains to-day occupy a recognised position in the Hindu social system. The real reason for the Hindu hostility to Buddhism was that it influenced and was in its turn influenced by in the later years of its prevalence in India, the alien Mongolian consciousness. Hinduism has always been extremely tolerant of indigenous heresies, but it is jealous of outside influence. Indian Buddhism, too, had become extremely corrupt and superstitious long before Hinduism re-established itself as the religion pre-eminently of the Indian people.

Other Indigenous Religions.—Buddhism and Jainism were originally only sects of Hinduism. Jainism even now is not so sharply divided from the latter religion as Buddhism is. Jains are everywhere a recognised section of Hindu Society, and in some parts of the country there has been an increasing tendency on their part to return themselves at the Census as Hindus. The outstanding feature of Jainism is the extreme sanctity in which all forms of life are held. The Jains are generally bankers and traders. Their number at the last Census was 1,248,182, the apparent decline being due to the tendency noted above for Jains to return themselves as Hindus. Buddhism is professed but by few persons in India. The Buddhist population of the Indian Empire is mainly Burmese. Their number is 10,721,453. The founders of Buddhism and Jainism are believed to have been contemporaries, whose date is assigned somewhere in the 5th Century B.C. Sikhism, which is the next important indigenous religion, had its origin many centuries later. The founder of Sikhism, Guru Nanak, flourished in the latter half of the 15th Century of the Christian era. Nanak's teaching amounted to nothing more than pure Theism. He taught that there is only one true God, he condemned idolatry, proclaimed the futility of pilgrimages and rites and ceremonies, and declared that the path to salvation lies through good deeds combined with devotion to the Supreme Being. He preached the brotherhood of men. Sikhism continued to exist as a pacific cult till about the end of the seventeenth century, when the persecutions of Aurangzeb had the effect of converting it into a militant creed. This momentous change was accomplished under the direction of Guru Govind, the tenth and last of the Gurus: "I shall send a sparrow," he once exclaimed and "lo! the imperial falcons will fly before it." On his death-bed, he exhorted his followers to regard the Granth, the sacred book of the Sikhs, as their Guru, to look upon it as the person of the living Guru. After his death, Sikhism passed through a period of deepest gloom, but it soon recovered and in 1758 the Sikhs entered Lahore in triumph. The teachings of Guru Nanak have profoundly affected Hindu thought and life in the Punjab, though the number of persons professing the Sikh religion is only 3,014,466 according to the 1911 Census. This represents an increase of over 40 per cent. since 1901. Two other religious movements, offshoots of Hinduism, remain to be mentioned, namely, the Brahmo-Samaj and the Arya-Samaj. Both of them are less than one hundred years old. The founder of the former was Raja Ram Mohan Roy, and of the latter, Swami Dayanand Saraswati. The Brahmo-Samaj does not believe in an infallible scripture, while the Arya-Samaj accepts the Vedas as Divinely revealed. Both the movements are opposed to idolatry and favour social reform. The Brahmo movement, appealing as it does to the cultured intellect, has not been making as much progress as the Arya-Samaj. The number of persons professing each of these creeds is 5,504 and 243,445 respectively. The stronghold of the Arya-Samaj is the Punjab, that of the Brahmo-Samaj, Bengal.

Non-Indian Religions.

Mahomedanism.—Of non-Indian religions, that is, of religions which had their origin outside India the religion which has the largest number of followers in this country is Mahomedanism. One hundred years before the Mussulmans obtained a foothold in Sind by right of conquest, they were settled in Cochin as traders and missionaries. The author of Cochin Tribes and Castes refers to a tradition that in the 7th Century, a Mahomedan merchant named Malak Medina, accompanied by some priests, had settled in or near Mangalore. The Kollam era of Malabar dates, according to popular tradition, from the departure of Cheruman Perumal, the last of the Perumal Kings, to Arabia, on his conversion to Islam. The date of the commencement of the era is the 25th August 825 A.D. For about twelve Centuries, Islam has existed in India side by side with Hinduism. During that period it has been greatly influenced by Hindu ideas and institutions. Moreover, the Indian converts to Mahomedanism have to a large extent retained the customs and beliefs of Hinduism. The writer of the article on religions of India in the new edition of the *Imperial Gazetteer* observes of Islam in India: "If it has gained some converts from Hinduism it has borrowed from it many of those practices which distinguish it from the original faith of Arabia. By degrees the fervid enthusiasm of the early raiders was softened down; the two religions learned to live side by side; and if the Mahomedan of the later days could never conceal his contempt for the faith of his 'pagan' neighbours, he came to understand that it could not be destroyed by persecution. From the Hindus Islam derived much of its demonology, the belief in witchcraft, and the veneration of departed Pirs or Saints. The village Musulman of the present day employs the Hindu astrologer to fix a lucky day for a marriage, or will pray to the village god to grant a son to his wife. This is the more natural, because conversion to Islam, whenever it does occur, is largely from the lower castes." Mahomedanism has

two main and several minor sects. The major sects are the Shiah and the Sunni. The great majority of Indian Mussulmans are of the latter sect. The Punjab and Sind in the North-West and East Bengal in the North-East are the strongholds of Islam in India. The Mussulman population of India, according to the Census of 1911, is 66,647,299. Of this number no less than 24 millions are in Bengal, about 12 millions in the Punjab, and about 5 millions in the United Provinces. Amongst Native States, Kashmere has the largest Mussulman population, about 2½ millions.

Christianity.—Indian Christianity has an even longer history than Indian Mahomedanism. According to the tradition prevailing among the Syrian Christians in Malabar, the introduction of Christianity and the establishment of the Original Church in Malabar in the year 52 A.D. are ascribed to the Apostle St. Thomas, who landed at Cranganore or Musiris, converted many Brahmins and others, ordained two Presbyters, and also founded seven churches, six in Travancore and Cochin, and the seventh in South Malabar (Cochin Castes and Tribes, Vol. II, Chapter XVI, p. 435). The history of Roman Catholicism in India dates from the beginning of the sixteenth Century. The first Protestant mission was established two centuries later by the Lutherans who started their work in Tranquebar in South India under Danish protection. The Christian population, according to the last Census, numbers 3,876,203. Nearly 2½ millions are inhabitants of the Madras Presidency and the Native States connected with it. Bihar and Bombay have each over 200,000 Christians.

Zoroastrianism.—This religion was brought or brought back to India in 717 A.D. by Parsis who, fleeing from persecution at the hands of the Mussulman conquerors of their native land, arrived at the little port of Sanjan, sixty miles north of Bombay in that year. According to the Indian antiquarian scholar, the late Rajendralal Mitra, the ancestors of the Hindus and Parsis dwelt together in the Punjab, when a religious schism led to the latter retracing their steps to Persia. This theory derives probability from the names of the beneficent and malefic deities referred to in the Hindu and Parsi sacred books: "What is most striking in the relations of the two faiths, is," writes Mr. Crooke in his article on the Religions of India in the *Imperial Gazetteer*: "that in the Avesta the evil spirits are known as Daeva (modern Persian Div), a term which the Indo-Aryans applied, in the form Deva, to the spirits of light. By a similar inversion, Asura, the name of the gods in the Rig Veda, suffered degradation and at a latter date was applied to evil spirits; but in Iran, Ahura was consistently applied in the higher sense to the deity, especially as Ahura Mazda, the wise, to the Supreme God." The Parsis have two sects. The principal difference between them appears to be that the holy days of the one precede those of the other by about a month. The number of Parsis, according to the last Census, is 100,096. The majority of the Parsis live in Bombay.

Jews.—The Beni-Israel at Kolaba, in Bombay and the Jews at Cochin are descendants of ancient Colonies. The Kolaba Colony dates back to the sixth century, and the Cochin colony to the second century A.D. Both Jewish colonies recognize a white and black section, the latter being those who have more completely coalesced with the native population. The Jews numbered 20,980 at the Census of 1911.

Animists.—Since the Census of 1891, an attempt has been made to enumerate the "Animists" separately from the Hindus. 10,295,168 persons are classed as Animists, according to the last Census. The difference between Animism and Anthropomorphism has been stated by Professor Westermark, to be that, while the animist worships inanimate objects as gods, Anthropomorphism consists in the worship of such objects as representatives and reflection of the Deity. As a subtle distinction of this kind is not within the grasp of the average enumerator, the category of Animists in the Census Schedules is largely conjectural. Mr. Crooke in the *Imperial Gazetteer* observes "Such a classification is of no practical value, simply because it ignores the fact that the fundamental religion of the majority of the people—Hindu, Buddhist, or even Mussulman is mainly Animistic. The peasant may nominally worship the greater gods; but where trouble comes in the shape of disease, drought, or famine, it is from the elder gods that he seeks relief."

SOCIAL INSTITUTIONS.

Uniformity of Indian Social Life.—Though India is a land of many religions and though each religious community has, as a rule, lived apart from the other communities for centuries, still there is a considerable uniformity in the arrangements and institutions of their social life. The social system of the Hindus is the type to which all other communities domiciled in the country have hitherto tended to conform. To a large extent, this uniformity of social arrangements is clearly due to the fact that, amongst the Mahomedans and Indian Christians, for instance, the converts from Hinduism continued to retain their old ideas in regard to social conduct. To a smaller extent, the motive which influenced them to conform to Hindu social ideal has been the convenience thereby caused in business intercourse with their Hindu neighbours. Thus, we find, there is scarcely any community in India which has not been more or less infected by the caste spirit. The Jews, the Parsis, the Christians, and even the Mahomedans have been influenced by it. Other Hindu social institutions and customs which have exerted a similar influence are the joint family system, the custom of child marriages, and of enforced widowhood, and the feeling that contact with persons engaged in certain occupations is polluting. In view of this general similarity of the social institutions of the several Indian communities, a description of the Hindu social system which is the great prototype of them all, will give a general idea of the social life of the Indian population as a whole. It should, however, be mentioned here that, in recent years, as the result of a growing communal consciousness, efforts have been

made by many of the Indian communities to discard whatever is in disaccord with the original simplicity of their respective faiths. But this movement has as yet touched no more than the highly educated fringe, and even among the latter, there are thoughtful men who distrust "revivals" as substitutes for reform.

Caste.—The most conspicuous social institution of India is Caste. Caste is based on birth. The effect of caste is to divide society into a number of vertical sections, and not as in modern countries, into horizontal sections. The economic and cultural differences among the members of each caste are great. The millionaire and the pauper, the scholar and the illiterate of one caste, form a social unit. The rich man of one caste must seek a husband for his daughter among the poor of his caste, if he cannot find one of a corresponding position in life. He can on no account think of marrying her to a young man of another caste, though as regards culture and social position, he may be a most desirable match. Thus, each caste is, within itself, a democracy in which the poor and the lowly have always the upper hand over the rich and the high-placed. In this way, the system of caste has, in the past, served as a substitute for State relief of the poor by means of special laws and institutions. To some extent, this is the case even now, but the economic pressure of these days, and the influence of Western education, are profoundly modifying the conception of caste. The growth of the English-educated class on the one hand, and of the modern industrial and commercial class of Indians, on the other with common aspirations and interests, is a factor calculated to undermine the importance of caste. Although for purely social purposes, it will, no doubt, linger for many years longer, it is bound ultimately to collapse before the intellectual and economic influences which are moulding modern India. The question how caste originated has been discussed by several learned Orientalists, but the latest and most authoritative opinion is that its rise and growth were due to several causes, the principal of them being differences of race and occupation. The four original castes of the Hindus have multiplied to nearly two thousand, owing to the fissiparous tendencies of Hindu social life. Some large castes consist of many thousands of families, while others, notably in Gujarat, comprise scarcely a hundred houses. Among Indian Mahomedans, there are several communities which are virtually castes, though they are not so rigidly closed as Hindu castes. Indian Christian converts, in some parts of the country, insist on maintaining the distinctions of their original castes, and in a recent case, one caste of Indian Christians contested, in a Court of Law, a ruling of their Bishop disallowing the exclusive use of a part of their church to members of that caste. The Parsis are practically a caste in themselves. The observations regarding caste apply more or less to the institution of the joint family of which really the former is an extension. This institution is rapidly breaking-up, though the rigidity of the Hindu law of succession operates wholly in its favour.

The Social Reform Movement.—The social reform movement among the Hindus to which reference is made in the foregoing paragraph, had its origin in efforts made by the Government of India, with the co-operation and support of enlightened Hindus, in the early part of the last century to put down the practice of *sati*, that is, burning the widow along with her dead husband. This cruel practice, which prevailed particularly among the high caste Hindus in Bengal, was eventually suppressed by legislation. But the discussions which ensued in connection with *sati* question led to the exposure of the hard lot of Hindu widows as a class. Remarriage was prohibited and as child marriages were common, several young girls were condemned to lead a life of celibacy on the death of their husbands. This led to immorality and infanticide by young widows, who were anxious to hide their shame was not infrequent. Led by the Pandit Ishwar Chandra Vidyasagara, a very learned Sanskrit scholar, a movement began which had for its object the removal of the ban on the remarriage of Hindu widows. The Pandit was able to prove from the Hindu religious books that the remarriage of widows had the sanction of antiquity. But it was necessary, in order to establish the validity of the remarriage of Hindu widows beyond doubt, to have a law passed by the Legislative Council of the Governor-General of India. The Pandit and his followers memorialised Government. There was strong opposition from the orthodox masses, but the Government of the day were convinced that justice was on the side of the reformers, and the Hindu Widow Remarriage Act was passed. The controversy on the question of the remarriage of widows led to other consequences. It was felt that the age at which girls were married was absurdly low, and that child marriages were at the root of many social evils. It was also realised that the general illiteracy of Indian women was the greatest obstacle in the way of reforming social customs, and that education of women should be the first plank in the social reform platform. The earliest social reformers in India were the Brahmo Samajists who discarded idolatry and caste. Other reformers since then have endeavoured to propagate ideas of social reform entirely on a secular basis. The Indian National Social Conference is their principal organisation, and it is supported by Provincial and District Conferences and Associations. Social reform ideas have made considerable headway during the last twenty-five years. Widow marriages are of weekly occurrence in some provinces. The restrictions of caste as to inter-dining and sea-voyage have lost much of their force. The age at which girls are married is steadily, if slowly, rising. The education of girls is making rapid progress. An increasing number of them go to high Schools and Colleges every year. But the most significant testimony to the spread of social reform ideas in the country is the remarkable diminution in the volume and weight of the opposition to them. The number of journals devoted to the social reform cause is increasing, and some of the newspapers which had made themselves conspicuous by their virulent opposition to social reform twenty years ago, now recognise its utility and importance.

SEX.

In India as a whole the proportion of females per thousand males rose steadily from 954 in 1881 to 968 in 1901. It has now fallen again to exactly the same figure as in 1881. The important aspect of these figures is the great contrast they show between India and Europe, where the number of females per thousand males varies from 1,093 in Portugal, and 1,068 in England and Wales, to 1,018 in Belgium, and 1,003 in Ireland. In drawing attention to this disparity the Chief Census Officer argued that the relatively high mortality amongst females was sufficient to account for the difference stated. Then in summarising the causes of this relatively higher mortality he said: "In Europe, boys and girls are equally well cared for. Consequently, as boys are constitutionally more delicate than girls, by the time adolescence is reached, a higher death-rate has already obliterated the excess of males and produced a numerical equality between the two sexes. Later on in life, the mortality amongst males remains relatively high, owing to the risks to which they are exposed in their daily avocations; hard work, exposure in all weathers and accidents of various kinds combine to make their mean duration of life less than that of women, who are for the most part engaged in domestic duties or occupations of a lighter nature. Hence the proportion of females steadily rises. In India, the conditions are altogether different. Sons are earnestly longed for, while daughters are not wanted. This feeling exists everywhere, but it varies greatly in intensity. It is strongest amongst communities such as the higher Rajput clans, where large sums have to be paid to obtain a husband of suitable status and the cost of the marriage ceremony is excessive and those like the Pathans who despise women and hold in derision the father of daughters. Sometimes the prejudice against daughters is so strong that abortion is resorted to when the midwife predicts the birth of a girl. Formerly, female infants were frequently killed as soon as they were born, and even now they are very commonly neglected to a greater or less extent. The advantage which nature gives to girls is thus neutralised by the treatment accorded to them by their parents. To make matters worse, they are given in marriage at a very early age, and cohabitation begins long before they are physically fit for it. To the evils of early child-bearing must be added unskilful midwifery; and the combined result is an excessive mortality amongst young mothers. In India almost every woman has to face these dangers. Lastly, amongst the lower classes, who form the bulk of the population, the women often have to work as hard as, and sometimes harder than, the men, and they are thus less favourably situated in respect of their occupations than their sisters in Europe." It is but fair to say that this conclusion has been challenged by many Indian writers, who attribute far greater importance than the Chief Census Officer to the omission of females at the enumeration.

MARRIAGE.

Although recognised in some backward parts, polyandry is now rare in India. With orthodox Hindus marriage is a religious sacrament which cannot be revoked. The Mahomedans allow a man to divorce his wife without any special reason, but he then becomes liable to pay her dower. The permission is seldom acted upon. The Buddhists of Burma regard marriage merely as a civil contract, and either side can annul it. The Hindu law places no restriction on the number of wives a man may have; but most castes object to their members having more than one wife, except for special reasons. A Mahomedan may have four wives, but he also in practice is generally monogamous.

Marriage Statistics.—In the population of ages and religions, about half the males and one-third of the females are unmarried; 46 per cent. of the males and 48 of the females are married, and 5 and 17 per cent. respectively are widowed. A reference to the age statistics shows that the great majority of the unmarried of both sexes are very young children, three-quarters of the bachelors being under 15 years of age, while a somewhat larger proportion of the spinsters are under 10; only one bachelor in 24 is over 30, and only one spinster in 14 is over 15. At the higher ages practically no one is left unmarried, except persons suffering from some infirmity or disfigurement, beggars, prostitutes, concubines, religious devotees and mendicants and a few members of certain hypergamous groups who have been unable to effect alliances of the kind which alone are permitted to them by the rules of their community. It is the persons of the above classes who contribute the 4 per cent. of the males over 40, and the 1 per cent. of the females over 30 who are not, and never have been, married.

Marriage Universal.—This universality of marriage constitutes one of the most striking differences between the social practices of India and those of Western Europe. It has often been explained on the ground that, with the Hindus, marriage is a religious necessity. Every man must marry in order to beget a son who will perform his funeral rites and rescue his soul from hell. In the case of a girl it is incumbent on the parents to give her in marriage before she reaches the age of puberty. Failure to do so is punished with social ostracism in this world and hell fire in the next. But it is not only with the Hindus that marriage is practically universal; it is almost equally so with the Mahomedans, Animists and Buddhists.

Early Marriage.—Another striking feature of the Indian statistics as compared with those of Western Europe is the early age at which marriage takes place. According to M. Sundbarg's table showing the average distribution by age and civil condition of the people of Western Europe according to the censuses taken about the year 1880, of the population below the age of 20, only one male in 2,147 is married and one female in 142. In India on the other hand, 10 per cent. of the male, and 27 per cent. of the female, population below that age are married. The number of males below the age of 5 who are married is small, but of those aged 5 to 10, 4 per cent. are married, and of those aged 10 to

15, 13 per cent. At '15-20' the proportion rises to 32, and '20-30' to 69 per cent. Of the females under 5, one in 72 is married, of those between 5 and 10, one in ten, between 10 and 15, more than two in five, and between 15 and 20, four in five. In the whole of India there are 2½ million wives under 10, and 9 million under 15 years of age. The Hindu law books inculcate marriage at a very early age, while many of the aboriginal tribes do not give their girls in wedlock until after they have attained puberty.

Widowhood.—It is only when we come to a consideration of the widowed that we find a state of things peculiarly Indian and one that seems to be derived from the prescriptions of the Hindu law-givers. The proportion of widowers (5 per cent. of the total male population) does not differ greatly from that in other countries, but that of the widows is extraordinarily large, being no less than 17 per cent. of the total number of females, against only 9 per cent. in Western Europe. When we consider their distribution by age, the difference becomes more still striking, for while in western Europe only 7 per cent. of the widows are less than 40 years old, in India 28 per cent. are below this age, and 1·3 per cent. (the actual number exceeds a third of a million) are under 15, an age at which in Europe no one is even married.

The large number of widows in India is due partly to the early age at which girls are given in marriage, and partly to the disparity which often exists between the ages of husband and wife, but most of all to the prejudice against the re-marriage of widows. Many castes, especially the higher ones, forbid it altogether, and even where it is not absolutely prohibited, it is often unpopular. Although widow marriage is permitted by their religion, and the Prophet himself married a widow, the Mahomedans of India share the prejudice to some extent. How the re-marriage of widows first came to be objected to, it is impossible to say, but it seems highly probable that the interdiction originated amongst the Aryan Hindus, that it was confined at first to the higher castes, and that it has spread from them downwards.

Infant Marriage.—It is difficult to draw from the statistics any definite conclusion as to whether infant marriage is becoming more or less common, but so far as they go, they point to a slight diminution of the practice. The figures for 1901 were abnormal owing to the famines of 1897 and 1900, and it is safer to take the year 1891 as the basis of comparison. There are now 18 Hindu girls per mille who are married at the age of '0-5' as compared with only 16 at that time, but at the age '5-10' the proportion has fallen from 146 to 132 and at '10-15' from 542 to 488. Amongst Mahomedans the proportion at the first mentioned age-period has fallen from 7 to 5, at the second from 83 to 65 and at the third from 474 to 393.

The practice has been denounced by many social reformers, since Mr. Malabari opened the campaign a quarter of a century ago; and the Social Conference which holds its meetings annually in connection with the National Congress has made the abolition of child marriage one of the leading planks in its platform. It is, as we have seen, strongly discouraged by the Brahmos in Bengal and the Aryas in Northern India. The more enlightened members of the higher castes who do not allow widows to re-marry are beginning to realise how wrong it is to expose their daughters to the risk of lifelong widowhood, and a feeling against infant marriage is thus springing up amongst them.

In two Native States action has been taken. In Mysore an Act has been passed forbidding the marriage of girls under eight altogether, and that of girls under fourteen, with men over fifty years of age. The object of the latter provision is to prevent those unequal marriages of elderly widowers with very young girls which are popularly believed to be so disastrous to the health of the latter, and which in any case must result in a large proportion of them leading a long life of enforced widowhood. The Gaekwar of Baroda, the pioneer of so much advanced legislation, has gone further. He passed for his State in 1904, in the face of a good deal of popular opposition, an "Infant Marriage Prevention Act", which forbids absolutely the marriage of all girls below the age of nine and allows that of girls below the age of twelve and of boys below the age of sixteen, only if the parents first obtain the consent of a tribunal consisting of the local Sub-Judge and three assessors of the petitioner's caste. Consent is not supposed to be given except on special grounds, which are specified in the Act.

Widow re-marriage.—The prohibition of widow marriage is a badge of respectability. Castes do not allow it rank higher on that account in social estimation. There is a strong tendency amongst the lower Hindu castes to prohibit, or at least, to discountenance, the marriage of widows. At the other end of the social structure there is a movement in the opposite direction. Many social reformers have inveighed against the condemnation of virgin widows to perpetual widowhood, and have pointed out that the custom is a modern innovation which was unknown in Vedic times. In many provinces recently there have been cases in which such widows have been given in marriage a second time, not only amongst Brahmos and Aryas, who naturally lead the way, but also amongst orthodox Hindus. A number of such marriages have taken place amongst the Bhatias of the Bombay Presidency. It is said that in the United Provinces considerably more than a hundred widows have been re-married in the last ten years. The actual results no doubt are small so far, but the first step has been taken and the most violent of the opposition has perhaps been overcome.

EDUCATION.

The general education policy of the Government of India, and its results, are discussed in a special article on Education (*q. v.*) But we may conveniently here indicate some of the education tendencies revealed in the census returns.

Of the total population of India, only 59 persons per mille are literate in the sense of being able to write a letter to a friend and to read his reply. The number who can decipher the pages of a printed book with more or less difficulty is no doubt much larger. Throughout India there are many Hindus who though unable to write can

drone out at least the more familiar parts of the Mahabharata or Ramayana to their neighbours, who feel that it is meritorious to listen to the recital of the sacred texts, even though they, and possibly the reader also, may not always fully understand the meaning. Similarly there are many Mahomedans, especially in Northern India, who can read the Koran, though they cannot write a word. Of this minor form of literacy the census takes no count. The number of persons who are literate in the sense in which the term was used at the present census is divided very unequally between the two sexes; of the total male population, 106 per mille are able to read and write, and of the female only 10. In other words there is only one literate female to every eleven males. If we leave out of account children under 15 years of age, the number of literate males per mille is 149, and that of literate females 13.

Education by Provinces.—Thanks to the free instruction imparted in the monasteries and the absence of the pardah system which hampers the education of females in other parts of India, Burma easily holds the first place in respect of literacy. In the whole population 222 persons per mille are literate and the proportion rises to 314 amongst persons over 15 years of age. In every thousand persons of each sex, 376 males and 61 females are able to read and write. Of the other main British provinces, Bengal and Madras come next with 77 and 75 literate persons per mille respectively. Bombay follows closely on their heels. Then after a long interval, come Assam, Bihar and Orissa and the Punjab. At the bottom of the list are the United Provinces and the Central Provinces and Berar, with 34 and 33 literate persons per mille respectively. Differences similar to those noticed above sometimes have their counterpart within provincial boundaries. Thus in Bihar and Orissa, the Orissa natural division has 64 literate persons per mille and the Chota Nagpur plateau only 28. In the Central Provinces and Berar, the proportion ranges from only 6 per mille in the Chota Nagpur States to 54 in the Nerbudda Valley.

Native States.—Education is more widely diffused in British provinces than in the Native States, which, taken as a whole, have only 79 males and 8 females per mille who are literate, as compared with 113 and 11 in British territory. The three Native States of Cochin, Travancore and Baroda, however, take rank above all British provinces except Burma, while in respect of female education Cochin divides with Burma the honours of first place. The Kashmir State where only 21 persons per mille can read and write, is in this respect the most backward part of India.

By Religion.—Of the different religious communities excluding the Brahmos and Aryas whose numbers are insignificant, the Parsis easily bear the palm in respect of education. Of their total number 711 per mille are literate, and the proportion rises to 831, if persons under 15 years of age are left out of account. Of the males nearly four-fifths are literate, and of the females nearly two-thirds. Amongst those over 15 years of age only 8 per cent. of the males and 26 per cent. of the females are unable to read and write. The Jains, who are mostly traders, come next, but they have only two literate persons to every five amongst the Parsis. Half the males are able to read and write, but only 4 per cent. of the females. It is noticeable, however, that whereas the proportion of literate males is only slightly greater than it was at the commencement of the decade, that of literate females has doubled. The Buddhists follow closely on the Jains, with one person in four able to read and write. Here also we see the phenomenon of a practically unchanged proportion of literate males (40 per cent.) coupled with a large increase in that of literate females, which is now 6 per cent. compared with 4 per cent. in 1901. The Christians (22 per cent. literate) are almost on a part with the Buddhists, but in their case the inequality between the position of the two sexes, is much smaller, the proportion of literate females being nearly half that of males. In order to ascertain how far the high position of Christians is due to the inclusion of Europeans and Anglo-Indians, the figures for Indian Christians have been worked out separately. The result is somewhat surprising; for although the Indian converts to Christianity are recruited mainly from the aboriginal tribes and the lowest Hindu castes, who are almost wholly illiterate, they have, in proportion to their numbers, three times as many literate persons as the Hindus and more than four times as many as the Mahomedans. One Indian Christian in six is able to read and write; for males the proportion is one in four; and for females one in ten. The influence of Christianity on education is strikingly illustrated by the figures for the province of Bihar and Orissa, where the proportion of Indian Christians who are literate is 76 per mille, compared with only 5 per mille amongst their animistic congeners. It has to be remembered, moreover, that many of the Indian Christians had already passed the schoolgoing age at the time of their conversion; the proportion who are able to read and write must be far higher amongst those who were brought up as Christians.

The Sikhs come next in order of merit, with one literate person in every fifteen; for males the ratio is one in ten and for females one in seventy. Here again, while the proportion for males shows only a slight improvement, that for females has doubled during the decade. The Hindus have almost as large a proportion of literate males per mille (101) as the Sikhs, but fewer literate females (8). The Mahomedans with only 69 and 4 per mille respectively, stand at the bottom of the list, except for the Animistic tribes of whom only 11 males and 1 female in a thousand of each sex are able to read and write. The low position of the Mahomedans is due largely to the fact that they are found chiefly in the north-west of India, where all classes are backward in respect of education, and in Eastern Bengal where they consist mainly of local converts from a depressed class. In the United Provinces, Madras and the Central Provinces and Berar they stand above or on an equality with the Hindus and the same is the case in Bombay excluding Sind. In Sind the Mahomedan population is exceptionally illiterate, but in the rest of the Presidency it consists largely of traders, and education is much more widely diffused amongst them than amongst Hindus. The figures for Hindus again are a general average for all castes, high and low. It will be seen further on that some of the higher Hindu castes

are better educated than the Buddhists while others are even less so than the Animists.

Increase of Literacy.—The total number of literate persons has risen during the decade from 15.7 to 18.6 millions or by 18 per cent. The number of literate males has increased by 15 and that of literate females by 61 per cent. The proportion who are literate per thousand males has risen from 98 to 106 and the corresponding proportion for females from 7 to 10. If persons under 15 years of age be excluded, the proportions are 138 and 149 for male and 8 and 13 for females. The great improvement in the proportion of literate females is most encouraging. It is true that too much stress should not be laid on this when the actual number is still so small, but, on the other hand, it must be remembered that the rate of increase was equally great in the previous decade, so that it has now been continuous for twenty years. The total number of females over 15 years of age who can read and write is now a million and a quarter compared with less than half a million twenty years ago.

Progress.—Before leaving these statistics of schools and scholars we may glance briefly at the progress which they show is being made. The total number of scholars in all kinds of educational institutions in 1891 was only 3.7 millions. In 1901 it had risen to 4.4, and in 1911 to 6.3 millions. 17.7 per cent. of the population of school-going age were at school in 1912 as compared with 14.8 per cent. in 1907. Between 1891 and 1911 the number of students in secondary schools and Arts Colleges has doubled, and the number in primary schools has increased by 67 per cent., the proportion ranging from 39 per cent. in Bombay to 204 per cent. in the United Provinces. Excluding Madras, where a school final examination has recently taken the place of the Matriculation, or Entrance examination of the University, the number of persons passing that examination has risen from 4,079 in 1891 to 10,512 in 1911. Including Madras the number who passed the Intermediate examination in Arts or Science has risen during the same period from 2,055 to 5,141, and that of those who obtained a degree in Arts, Science, Medicine or Law from 1,437 to 5,373. The general conclusion appears to be that, while the general rate of progress is far greater than would appear from a comparison of the census returns of 1901 and 1911, it is most marked in respect of secondary education.

There was a continuous fall, both in the number and the proportion of persons afflicted from 1881 to 1901; and this has now been followed by a move in the other direction. Though the proportion is smaller the number of the insane and the deaf-mutes is now about the same as it was thirty years ago. The number of lepers and blind however is less by about a sixth than it then was.

Infirmities.

The total number of persons suffering from each infirmity at each of the last four censuses is shown in the following table:—

Infirmity.	Number afflicted.			
	1911	1901	1891	1881
Insane	81,006 **26**	66,205 **23**	74,279 **27**	81,132 **35**
Deaf-mutes	199,891 **64**	153,168 **52**	196,861 **75**	197,215 **86**
Blind	443,653 **142**	354,104 **121**	458,868 **167**	526,748 **229**
Lepers	109,094 **35**	97,340 **33**	126,244 **46**	134,968 **57**
Total	833,644 **267**	670,817 **229**	856,252 **315**	937,063 **407**

NOTE.—The figures in heavier type represent the proportion per 100,000 of the population.

Insanity.—In respect of the prevalence of insanity, India compares very favourably with European countries. According to the latest returns, the proportion of persons thus afflicted in England and Wales is 364 per hundred thousand of the population, or fourteen times the proportion in India. This may be due partly to the fact that the English statistics include the weak-minded as well as those who are actively insane, and to the greater completeness of the return in a country where the majority of the mentally afflicted are confined in asylums; but the main reason no doubt is to be found in the comparatively tranquil life of the native of India. It is well known that insanity increases with the spread of civilisation, owing to the greater wear and tear of nerve tissues involved in the struggle for existence.

The total number of insane persons exceeds by 9 per cent. that returned in 1891, but their proportion per hundred thousand of the population has fallen from 27 to 26. The decline is fairly general, the chief exceptions being the United Provinces, the North-West Frontier Province and four Native States in the peninsular area. In the United Provinces the number of the insane per hundred thousand of the population has risen from 12 to 18. No satisfactory explanation of this large increase is forthcoming.

Deaf-Mutes.—By deaf-mutism is meant the congenital want of the sense of hearing which, in the absence of special schools, such as are only

just beginning to appear in India, necessarily prevents the sufferer from learning to talk. Clear instructions were given to the enumerators to enter only persons who were congenitally afflicted. Some few, perhaps, may have been included in the return who had lost the power of speech or hearing after birth, but the total number of such mistakes is now very small. In India as a whole 74 males and 53 females per hundred thousand are deaf and dumb from birth. These proportions are much the same as those obtaining in European countries.

Blindness.—In India as a whole fourteen persons in every ten thousand of the population are blind, as compared with from eight to nine in most European countries and in the United States of America. It is a matter of common observation that blindness is ordinarily far more common in tropical countries than in those with a temperate climate. It is, however, less common in India than in parts of Eastern Europe; in Russia, for instance, nineteen persons in every ten thousand are blind.

Lepers.—In India as a whole 51 males and 18 females per hundred thousand persons of each sex are lepers. Of the different provinces, Assam suffers most, then Burma, and then in order Bihar and Orissa, the Central Provinces and Berar, Madras, Bengal, Bombay, the United Provinces, the Punjab and the North-West Frontier Province. In the two last-mentioned provinces there are only 17 male and 8 female lepers per hundred thousand of each sex. The occurrence of leprosy is very local and its prevalence varies enormously within provincial boundaries.

The number of lepers has fallen since 1891 from 126 to 109 thousand, a drop of more than 13 per cent. When it is remembered that the number of persons suffering from the other three infirmities taken together has remained almost stationary, it may be concluded that the decrease in the reported number of lepers is genuine and indicates a real diminution in the prevalence of the disease. It is possible that this is partly the result of the improved material condition of the lower castes, amongst whom leprosy is most common, and of a higher standard of cleanliness. The greater efforts which have been made in recent years to house the lepers in asylums may also have helped to prevent the disease from spreading. The total number of asylums in India is now 73, and they contain some five thousand inmates, or about 4.7 per cent. of the total number of lepers. This may not seem much, but it has to be remembered that the movement is still in its infancy and that progress has been very rapid in recent years. Complete statistics for 1901 are not readily available, but it is known that in the two provinces of Bengal and Bihar and Orissa, the number of lepers in asylums was then only about half what it is now. The greater part of the credit for the provision of asylums for these unfortunate persons belongs to the Mission for Lepers in India and the East, which receives liberal help from Government. Its latest report shows that there are 3,537 lepers in the forty asylums maintained by the Society.

The belief is growing that leprosy is communicated from one human being to another by some insect, and two South African doctors have recently published papers implicating the bed bug (*acanthia lectularia*). If this theory be correct it is obvious that the segregation of lepers in asylums must reduce the number of foci of the disease, and to that extent prevent it from spreading. It is worthy of note that in many of the districts where the disease was most prevalent in 1891, there has since been a remarkable improvement. Chamba which in 1891 had 34 lepers in every ten thousand of its population, now has only 15; in Birbhum the corresponding proportion has fallen from 35 to 16, in Bankura from 36 to 23, in Simla 29 to 18, in Dehra Dun from 20 to 11, in Garhwal from 17 to 10, in Burdwan from 22 to 14 and in North Arakan from 28 to 20.

OCCUPATIONS.

Nowhere are the many points of difference in the local conditions of India, as compared with those of western countries, more marked than in respect of the functional distribution of the people. In England, according to the returns for 1901, of every hundred actual workers, 58 are engaged in industrial pursuits, 14 in domestic service, 13 in trade and only 8 in agriculture, whereas in India 71 per cent. are engaged in pasture and agriculture and only 29 per cent. in all other occupations combined. The preparation and supply of material substances afford a means of livelihood to 19 per cent. of the population (actual workers) of whom 12 per cent. are employed in industries, 2 in transport and 5 in trade. The extraction of minerals supports only 2 persons per mille; the civil and military services support 14, the professions and liberal arts 15, and domestic service 18 persons per mille. The difference is due to the extraordinary expansion of trade and industry which has taken place in Western Europe during the last century in consequence of the discovery of the steam engine, and to the great improvement in means of transport and the use of mechanical power in factories of all kinds which have resulted therefrom. In Germany, sixty years ago, the agricultural population was very little less than it is at the present time in India. There are, as we shall see further on, indications that in the latter country also great changes are impending; and it is not unlikely that, as time goes on, the functional distribution of the people will become less dissimilar from that now existing in Europe.

The village.—Until the recent introduction of western commodities, such as machine-made cloth, kerosine oil, umbrellas and the like, each village was provided with a complete equipment of artisans and menials, and was thus almost wholly self-supporting and independent. Its chamars skinned the dead cattle, cured their hides, and made the villagers' sandals and thongs. Local carpenters made their ploughs, local blacksmiths their shares, local potters their utensils for cooking and carrying water, and local weavers their cotton clothing. Each village had its own oil-pressers, its own washermen, and its own barbers and scavengers. Where this system was fully developed, the duties and remuneration of each group of artisans were fixed by custom and the caste rules strictly prohibited a man from entering into competition with another of the same caste. The barber, the washerman, the blacksmith, etc.

all had their own definite circle within which they worked, and they received a regular yearly payment for their services, which often took the form of a prescriptive share of the harvest, apportioned to them when the crop had been reaped and brought to the threshing floor.

Village sufficiency declining.—Even in India proper the village is no longer the self-contained industrial unit which it formerly was, and many disintegrating influences are at work to break down the solidarity of village life. The rising spirit of individualism, which is the result of modern education and western influences, is impelling the classes who perform the humbler functions in the economy of village life to aspire to higher and more dignified pursuits. There is also a tendency to replace the prescriptive yearly remuneration by payment for actual work done. In many parts for instance, the village Chamar is no longer allowed the hides of dead cattle as his perquisite, but receives instead a payment for removing the cattle and for skinning them; and the hides are then sold to a dealer by the owner of the animal. Improved means of communication have greatly stimulated migration and the consequent disruption of the village community, and by facilitating and lowering the cost of transport of commodities, have created a tendency for industries to become localised. The extensive importation of cheap European piecegoods and utensils, and the establishment in India itself of numerous factories of the western type, have more or less destroyed many village industries. The high prices of agricultural produce have also led many village artisans to abandon their hereditary craft in favour of agriculture. The extent to which this disintegration of the old village organisation is proceeding varies considerably in different parts. The change is most noticeable in the more advanced provinces, whereas in comparatively backward tracts, like Central India and Rajputana, the old organisation remains almost intact.

Agriculture.—India is pre-eminently an agricultural country. Of its total population 72 per cent. are engaged in pasture and agriculture, *viz.*, 69 per cent. in ordinary cultivation and 3 per cent. in market gardening, the growing of special products, forestry and the raising of farm stock and small animals. The 217 million persons supported by ordinary cultivation comprise nearly 8 million landlords, 167 million cultivators of their own or rented land, over 41 million farm servants and field labourers and less than a million estate agents and managers and their employes.

On the average, in the whole of India, every hundred cultivators employ 25 labourers, but the number varies in the main provinces from 2 in Assam, 10 in the Punjab, 12 in Bengal and 16 in the United Provinces to 27 in Burma, 33 in Bihar and Orissa, 40 in Madras, 41 in Bombay and 59 in the Central Provinces and Berar. These local variations appear to be independent alike of the fertility of the soil and of the density of population. The conclusion seems to be that the differences are due to social, rather than economic, conditions, and that those provinces have most field labourers which contain the largest proportion of the depressed castes who are hereditary agrestic serfs.

Of the two million persons supported by the growing of special products rather more than half were returned in tea, coffee, cinchona, indigo, etc., plantations and the remainder in fruit, vegetable, betel, vine, arecanut, etc., growers. Of those in the former group, nearly nine-tenths were enumerated in the tea-gardens of Assam (675,000) and Bengal (248,000) and most of the remainder in the coffee, tea, rubber and other plantations of Southern India.

Of the 16 persons per mille who were classed under Raising of farm stock, nearly four-fifths were herdsmen, shepherds, and goatherds, rather more than one-seventh were cattle and buffalo-breeders, and keepers and one-eleventh sheep, goat and pig breeders.

Fishing and Hunting.—In the whole of India about 2 million persons, or 6 per mille subsist by fishing and hunting. Of these, all but a small fraction are fishermen. About half the total number are found in the two provinces of Bengal (644,000) and Madras (313,000). The number who live by this occupation is exceptionally small in the United Provinces (38,000) and Punjab (10,000). The Punjab Superintendent says that, owing to the destruction of immature fish and fry and the obstruction of the free passage of fish to their spawning grounds, the five thousand odd miles of large rivers and major canals in his Province probably produce less food than an equal volume of water in any other part of the world. The sea fisheries of India, though now known to be very valuable, are at present but little exploited.

Mines.—In the whole of India only 530,000 persons or 17 in every ten thousand are supported by the extraction of minerals. Coal mines and petroleum wells account for about half the total number (277,000). The coal fields of Bihar and Orissa support 127,000 persons and those of Bengal 115,000. In the Manbhum district, which contains the Jherria, and part of the Raniganj coal field, 111,000 persons or 7 per cent. of the inhabitants are supported by work in the collieries. Though the Raniganj coal field was discovered as far back as 1774 many years elapsed before much use was made of the discovery. In 1840 the total quantity of coal sent to Calcutta was only 36,000 tons. It rose to 220,000 tons in 1858 and to six million tons in 1901. Since then the growth has been very rapid. The output in 1911 from the coal mines of Bengal and Bihar and Orissa exceeded eleven million tons. In the same year the total yield for all India was twelve million tons. Of the latter quantity nearly one million tons were exported, and four million were used by the railways. The total output however is still trivial compared with that of the United Kingdom, which amounted in 1911 to 272 million tons. Most of the persons employed in the mines of Bengal and Bihar and Orissa are aboriginal or quasi-aboriginal; about half are Bauris and Santals, and many of the remainder belong to the Bhuiya, Chamar or Mochi, Kora, Rajwar, Dosadh and Musahar castes. The great majority are recruited locally. The coal mines of Hyderabad, Assam, the Central Provinces and Berar, and the Punjab support between them only about 27,000 persons.

Metals.—Of the 98,000 persons supported by mining for metals, more than half were returned

in the Mysore State, and of these the great majority were employed in the gold mines of Kolar, where for some years past the value of the gold produced has been about £2,000,000 per annum. The mines in the Central Provinces and Berar, which support 21,000 persons, are principally for the extraction of manganese. The mining of this ore was greatly fostered by the Japanese War, which caused Russia to discontinue her exports of it for the time. There has since been a period of depression, which seems now to have come to an end. Manganese is extracted elsewhere also, *e.g.*, in Mysore and Madras. In Burma tin and lead are extracted as well as silver and wolfram in small quantities. Iron ore is worked in various places, but chiefly in Mayurbhanj which supplies the raw material for Messrs. Tata and Company's ironworks at Sakchi.

Of the 75,000 persons supported by work in quarries and mines for non-metallic minerals, other than coal and salt, two-fifths were enumerated in Bombay, where the quarrying of stone and limestone is an important business chiefly in the neighbourhood of Bombay city. In Bihar and Orissa and Madras mica mining is of some importance.

The extraction of salt and saltpetre supports 78,000 persons. Nearly a third of the total number are found in Bihar and Orissa where the Nuniyas are still largely employed in digging out and refining saltpetre. This industry is carried on also in the Punjab. Rock salt is mined in the same province and in Rajputana.

The total number of persons employed in the extraction of minerals has risen during the decade from 235 to 517 thousand. The most noticeable increase is in Coal mines and petroleum wells which embrass nearly three times as many persons as in 1901. The bulk of the increase has occurred in Bengal and Bihar and Orissa, but it is to be noted that Hyderabad and the Central Provinces and Berar which now contribute about 12,000 persons to this group gave practically none ten years previously. Miners for metals are 2½ times as numerous as they were in 1901.

Industries.—Of the 35·3 million persons dependent on industrial occupations, nearly one-fourth, or 2·6 per cent. of the total population, are supported by textile industries. Of these, the most important, from a numerical point of view, are industries connected with cotton. The number of persons supported by cotton spinning, sizing and weaving is close on 6 millions, and another half million are employed in ginning, cleaning and pressing the raw material. The proportion of the population supported by cotton spinning, sizing and weaving is 37 per mille in the Punjab, 29 in Bombay and Rajputana, 27 in Madras, 22 in the Central Provinces and Berars and 18 in the United Provinces. In Burma, Bihar and Orissa, Bengal and Assam it is much smaller, ranging only from 8 to 11 per mille. Nearly two-fifths of a million persons are supported by rope, twine and string making, and more than a third of a million by jute spinning, pressing and weaving. Other important textile industries are wool spinning and weaving, silk spinning and weaving, and dyeing and printing, etc., each of which supports from a quarter to a third of a million persons. It is clear therefore that so far as India is concerned, in spite of the growing number of cotton mills in the Bombay Presidency and elsewhere, the hand industry still, to a great extent, hold its own. Only 13,000 persons are employed in silk spinning and weaving factories, 7,000 in woollen factories including those for the making of carpets and even smaller numbers in other factories of this class. Some of these textile industries are very local. Those connected with jute are practically confined to Bengal, in which province nine-tenths of the persons supported by them were enumerated. More than half the persons dependent on rope, twine and string making and on working in 'other fibres' chiefly coir, and palmyra fibre were enumerated in Madras and its Native States and a quarter of those supported by wool industries in Hyderabad. Half the silk spinners and weavers are found in two provinces, Bengal and Madras. The dyeing, bleaching and printing of textiles and lace, crape, and similar industries are almost unknown in Assam, Bengal, Burma and the Central Provinces and Berar.

Growth of Industry.—As compared with 1901 there has been a decrease of 6·1 per cent. in the number of persons supported by textile industries. This is due mainly to the almost complete extinction of cotton spinning by hand. Weaving by hand has also suffered severely from the competition of goods made by machinery both in Europe and in this country. There has been a large increase in the number of Indian cotton mills, but as the output per head in factories is far greater than that from hand-looms, the addition of a given number of factory hands involves the displacement of a far larger number of hand workers.

Hides.—As compared with 1901, a large decline in the number returned as general workers in hides is partly compensated for by an increase in shoe, boot and sandal makers. In the two heads taken together there has been a drop of about 6 per cent. During the same period the number of hide dealers has more than doubled. Owing to the growing demand for hides in Europe and America and the resulting high prices, the export trade in hides has been greatly stimulated. The local cobbler, on the other hand, having to pay more for his raw material and feeling the increasing competition of machine-made goods has been tempted to abandon his hereditary craft for some other means of livelihood, such as agriculture or work in factories of various kinds.

Woodworkers.—Wood cutting and working and basket making support 2·5 and 1·3 million persons, respectively, or 3·8 million in all. The number of factories devoted to these industries is still inconsiderable. Saw mills and timber yards each employ some 12,000 persons and carpentry works about 5,000. There is only one cane factory with 46 employes.

Metal workers.—The workers in metals are only about half as numerous as those in wood and cane. About three-quarters of the persons in this order are general workers in iron, and one-seventh are workers in brass, copper and bell-metal.

The total number of persons dependent on metal industries shows a decline of 6·6 per cent. as compared with 1901.

Earthenware.—The manufacture of glass, bricks, and earthenware supports in all 2·2 milli-

on persons. Seven-eights of these are the ordinary village potters who make the various earthenware utensils for cooking and storing water which are required by the poorer classes, as well as tiles, rings for wells and the like. In most parts of India the potter, like the carpenter, oil-presses, blacksmith and cobbler, is found in practically every village.

Chemicals.—In a country like India, whose economic development is still backward, it is not to be expected that a large number of persons should be engaged in industries connected with chemical products. The total number returned as supported by these industries exceeds a million but it shrinks to less than 100,000 if we exclude manufacture and refining of vegetable and mineral oils. The 1·1 million persons included in this group are almost entirely village artisans who extract oil from mustard, linseed, etc., grown by their fellow villagers.

Food Industries.—Of the 3·7 million persons supported by food industries the great majority follow occupations of a very primitive type. Rice pounders and huskers and flour grinders number 1·6 million, grain parchers, etc., 0·6 million, and toddy drawers about the same. There are 352,000 butchers, 281,000 sweetmeat makers, etc. and 97,000 bakers and biscuit makers. The other five heads of the scheme contain between them only 227,000 persons. The principal factories in connection with food industries are flour and rice mills, which employ 42,000 persons, sugar factories 8,000, opium, ganja and tobacco factories 7,000 and breweries 5,000

Dress.—In all 7·8 million persons are supported by industries of dress and the toilet. Of these 1·3 millions are grouped under the head tailors, milliners, dressmakers, etc., and 2·1 million under each of the heads (*a*) shoe, boot and sandal makers, (*b*) washermen, cleaners and dyers, and (*c*) barbers, hair-dressers and wigmakers.

Transport.—Transport supports about five million persons, or 16 per mille of the population, *viz.*, transport by water one million, transport by road 2·8 million, transport by rail one million, and the post, telegraph and telephone services 0·2 million. Transport by water, about three-fifths are owners of country boats and their boatmen; nearly one-sixth are employed on inland steamers and ocean-going vessels of all kinds, one-sixth are engaged in the construction and maintenance of canals, and one-twentieth in the management and upkeep of harbours. Transport by road includes one million carters and cart-owners, more than half a million porters and messengers and considerably less than that number of owners and drivers of pack animals. Palki owners and bearers number 202,000 and persons engaged on road construction and maintenance 563,000.

Trade.—The number of persons dependent on trade for their livelihood is 12·8 millions, or 6 per cent. of the population. Of these, more than half are supported by trade in food stuffs, including 2·9 million grocers and sellers of vegetable oil, salt and other condiments, who are for the most part the petty village shop-keepers, commonly known as salt and oil sellers; 2·2 million grain and pulse dealers; 1·6 million betel leaf, vegetables and fruit sellers, and nearly a million fish vendors. Trade in textiles is the next most important item, supporting 4 per mille of the population. In connection with these figures, it is necessary to draw attention to the great difference which exists between the economic conditions of India and those of Europe. In Europe the seller is almost invariably a middleman, whereas in India he is usually the maker of the article, and is thus classified under the industrial and not the commercial head.

Professions.—The public administration and the liberal arts support 10·9 million persons or 35 per mille, namely, public force 2·4 million, public administration 2·7 million, the professions and liberal arts 5.3 million, and persons of independent means about half a million. The head Public force includes the Army (0·7 million), the Navy (less than 5,000) and the Police (1·6 million). India has practically no navy and her army is exceptionally small, as compared with those of European countries. The number of persons actually employed in it is only 384,000 or 1 per mille of the population, as compared with 4 per mille in England and 10 in Germany. The figures for Police include village watchmen and their families. The real number in this group is greater than that shown in the census tables; many of these village officials have other means of susbsistence, and the latter were sometimes shown as their principal occupation. Under the head Public administration are classed only those persons who are directly engaged in the Executive and Judicial administration and their establishments, whether employed directly under Government or under a municipality or other local body. Employees of Government and local bodies who have a specific occupation of their own, such as doctors, printers, school-masters, land surveyors, etc., are shown under the special heads provided for these occupations. Of the 5·3 million persons supported by the professions and liberal arts, Religion accounts for, rather more than half, Letters and the arts and sciences for more than a sixth, Instruction and Medicine for one-eighth, and Law for one-eighteenth. The main head Religion contains 1·6 million priests, ministers, etc., 0·7 million religious mendicants, 0·4 million pilgrim conductors, circumciser and persons engaged in temples, burial or burning ground service, and 0·06 million catechists and other persons in church and mission service. Of Law, more than half are lawyers, law agents and mukhtiars and the remainder lawyers' clerks and petition writers. More than two-thirds of the persons under the Medical head are medical practitioners of various kinds, including dentists: the remainder are midwives, vaccinators, com pounders, nurses, etc. The real number of persons who act as midwives must exceed considerably that shown in the return. This service is usually performed by the wife of the village scavenger or other person of low caste; and she must often have been returned under her husband's occupation. Nearly three-fourths of the persons classed under Letters and the arts and sciences are found in Music composers and masters, players on musical instruments, singers, actors and dancers. The bulk of these are village drummers, whose services are invariably requisitioned on the occasion of marriages and religious festivals.

Factories.—There are in the whole of India 7,113 factories employing 2·1 million persons or 7 per mille of the population. Of these per-

sons, 810,000, or two-fifths of the total number are employed in the growing of special products, 558,000 in textile industries, 224,000 in mines, 125,000 in transport, 74,000 in food industries, 71,000 in metal industries, 49,000 in glass and earthenware industries, the same number in industries connected with chemical products and 45,000 in industries of luxury. Of the special products, tea (703,000 employees) is by far the most important. The number of tea gardens is not much more than double that of coffee plantations, but twelve times as many persons are employed on them. The coffee plantations are four times as numerous as indigo concerns and employ twice as many labourers. Of the labourers on tea gardens, 70 per cent. are returned by Assam and 27 per cent. by Bengal. Madras, Mysore and Coorg contain between them practically all the coffee plantations, and Bihar and Orissa all the indigo factories. Of the persons working in mines, 143,000, or 64 per cent. are found in collieries, eight-ninths of them being in the two provinces of Bihar and Orissa and Bengal. The number of persons engaged in gold mines is about one-fifth of the number in the coal mines: nine-tenths of them were returned from Mysore. Of the 558,000 workers, in textile industries, cotton mills contribute 308,000 and jute, hemp, etc., 222,000. About two-thirds of the persons employed in cotton mills are found in the Bombay Presidency, from 8 to 9 per cent. in the Central Provinces and Berar and Madras, and about half this proportion in the united Provinces and Bengal. Jute mills are a monopoly of Bengal. Of the industries connected with transport, railway workshops are by far the most important, and afford employment to 99,000 persons, or 79 per cent. of the total number of persons engaged in these industries: about one-fourth of them are found in Bengal and one-sixth in Bombay. Of the factories connected with food industries, the most prominent are rice and flour mills. These employ 42,000 persons, of whom nearly three-fourths are engaged in the rice mills of Rangoon and other places in Burma.

Indians and Europeans.—The proportion of Indians to Europeans varies considerably in different classes of factories. The great majority of the larger concerns are financed by European capital, and in such cases management or direction is generally European, and the Indians shown under this head are engaged for the most part on supervision and clerical work. In Assam where 549 tea gardens are owned by Europeans and 60 by Indians, there are 536 European and 73 Indian managers. In the coffee plantations of Madras and Mysore the same principle is apparent. The jute mills of Bengal are financed by European capital and the managers are all Europeans; while in Bombay where Indians own 110 of the cotton spinning and weaving mills and share 25 with Europeans, and the latter own exclusively only 12, all but 43 of the managers are Indians. Sometimes the proportion of Europeans employed in supervision, etc., varies with the character of the work. In the gold mines where the planning and control of the deep underground workings require a high degree of skill, Europeans outnumber Indians in the ratio of nearly 4 to 1, whereas in the collieries Indians are twelve times as numerous as Europeans.

Anglo-Indians.—Anglo-Indian is used at the census as the designation of the mixed race, descended usually from European fathers and Indian mothers, which was formerly known as Eurasian. The total number of persons returned under this head, excluding Feringis, is now 100,451 or 15 per cent. more than in 1901. Anglo-Indians are most numerous in Madras (26,000) and Bengal (20,000). In the United Provinces, Bombay and Burma the number ranges from 8 to 11 thousand, and in Bihar and Orissa, the Central Provinces and Berar and the Punjab it is about 3,500. In the States and Agencies Anglo-Indians aggregate only 14,000, more than half being found in Mysore and Hyderabad. The increase in their number as compared with 1901 may be due partly to some Anglo-Indians having returned themselves under their new designation who would have claimed to be Europeans if Eurasian had been the only alternative and it is also perhaps due in part to a growing tendency amongst certain classes of Indian Christians to pass themselves off as Anglo-Indians. The Punjab Superintendent accounts in this way for the greater part of the increase of 42 per cent. in the number returned as Anglo-Indians in his province. The proportional increase is also large in the United Provinces, Bombay, Burma, the Central Provinces and Berar and the Cochin State. Although Madras still has the largest number of Anglo-Indians, the total is slightly less now than it was twenty years ago. Possibly this is because more careful enumeration has reduced the number of Indian Christians who thus returned themselves. The number of Anglo-Indians in Burma is remarkably large in view of the comparatively short time that has elapsed since it became a British possession and the strength of its European population. In this community there are 984 females per thousand males, or slightly more than the corresponding proportions in the general population of India. More than half of the persons returned as Anglo-Indians are Roman Catholics, and one-third are Anglicans; the number of Presbyterians, Baptists, and Methodists ranges from 2 to 2½ per cent.

Education.

Indian Education is unintelligible except through its history. Seen thus it affords the spectacle of a growth which, while to one it will appear as a huge blunder based on an initial error of judgment easily avoided, to another stands out as a symbol of sincerity and honest endeavour on the part of a far-sighted race of rulers whose aim has been to guide a people alien in sentiments and prejudices into the channels of thought and attitudes best calculated to fit them for the needs of modern life and western ideals. A careful survey of the history of Indian Education will reveal the opposition between two tendencies whose struggle for supremacy was finally decided by Lord Macaulay's Minute of 1835. The beginnings of public education in India belong to a generation before Macaulay's regime. But it was not till Macaulay poured such emphatic contempt on Oriental learning that the Government in India in general definitely chose the path of English education as the road to future progress. Macaulay's Minute crystallises a point of view which had already some years before begun to impress itself upon educationists in this country. And when we find a statesman of the acumen of Lord Curzon saying "Ever since the cold breath of Macaulay's rhetoric passed over the field of the Indian languages and Indian text books, the elementary education of the people in their own tongue has shrivelled and pined," we must not suppose that he regarded Macaulay as solely responsible for the trend which modern education has taken. It needs but a cursory glance at the history of education in India under British rule to make clear once for all that education on Western lines was necessary as an answer to a growing demand which none but callous rulers could refuse, as also for the very forcible reason that without some kind of organised training of Indians in English composition and ideas the practical work of administration which demands an ever-increasing number of clerical assistance to meet the needs of steadily accumulating office work, could never have been carried on. These two points give one the clue to the main features of Indian education (1) the claim of newly-awakened races to be allowed to substitute for their own lifeless learning the progressive culture of modern Western thought; and (2) the obvious utility of a system whose object should be, in part at least, to assist Indians to a development of their capacities and sympathies on lines which might be of service in the actual government of the country. With reference to this last point the following consideration may be urged. The object of our great Universities and Public Schools in England is generally admitted to be something more than the satisfaction of purely theoretical interests. They are meant to be the training ground of capable public servants. Let us once admit this to be a necessity in England; if then we recognise the impossibility of administering the great Indian Empire through Englishmen alone, there seems to be no adequate reason for refusing to apply the same methods to India. And as there is nothing in Indian History to show the particular value of any Oriental system of education as a training for public service, the logical conclusion is that Indians should be educated in English along Western lines. If an observer were confronted with a country ruled by foreign administrators backed up by a foreign army, he would infer on a priori grounds that the said foreign power had included in its legislation a system of education analogous to its own—if his opinion of it had not led him to suppose that it had adopted the sceptical or ungenerous policy of not educating its subjects at all. That would present itself as the only possible alternative. And the problem of Indian Education may be said to resolve itself into a doubt which of the two policies is preferable, that of non-education or that of English education. Yet the doubt itself has only to be stated to be solved. And the task of explaining Indian education becomes in the end simply one of showing how the initial encouragement on the part of British rulers of Oriental learning did not so much begin education as foster the desire for education, until at last the Government undertook the duty of guiding such aspirations into what it conceived to be the right channel. To this end our aim will be to show (1) Indian education in the stage of conception, and its birth somewhere about the time of Macaulay's Minute, (2) its growth and organisation, (3) its present situation.

THE BIRTH OF INDIAN EDUCATION.

The seeds of an interest in education may be said to have been sown by the foundation of the Calcutta Madrasa by Warren Hastings in 1781, and the Sanskrit College at Benares by Jonathan Duncan in 1791. Whatever interest there was in learning during this period was directed solely to the encouragement of Sanskrit and Arabic. Even the Act of 1813 which set apart a lakh of rupees for "the revival and promotion of literature and the encouragement of learned natives of India, and for the introduction and promotion of a knowledge of the sciences in the British territories of India" was interpreted as a scheme for the encouragement of Sanskrit and Arabic; and it was not till the famous meeting of the Governor-General's Council in 1835 that it was definitely discussed whether it might not accord with the meaning of the Act of 1813 to use at least part of the money for the encouragement of the study of English. But other forces had been already at work. In 1817 the Hindu College was opened at Calcutta with the express object of instructing "the sons

Statement of Educational Progress in INDIA.

	1910-11.	1911-12.	1912-13.	1913-14.	1914-15. ‡	1915-16.
Area in square miles	1,152,894	1,135,513	1,137,686	1,137,686	1,029,399	1,032,011
Population { Male	130,113,723	130,408,551	130,302,188	130,302,188	124,182,692	124,190,672
Population { Female	124,706,893	124,960,002	124,851,633	124,851,633	118,806,255	118,812,827
Total Population	254,820,616	255,368,553	255,153,821	255,153,821	242,988,947	243,003,499
Public Institutions for Males.						
Number of arts colleges	128	130	128	138	136	136
Number of high schools*	1,203	1,219	1,273	1,349	1,382	1,440
Number of primary schools	108,144	110,692	113,955	116,650	116,012	120,858
Male Scholars in Public Institutions.						
In arts colleges	24,806	29,369	32,931	38,836	41,441	45,349
In high schools *	364,764	390,881	428,182	466,386	483,249	502,681
In primary schools	3,936,419	4,202,631	4,428,531	4,609,405	4,518,044	4,645,046
Percentage of male scholars in public institutions to male population.	3·8†	4·0	4·3	4·5	4·6	4·7
Public Institutions for Females.						
Number of arts colleges	8	10	10	11	11	11
Number of high schools*	130	135	144	157	158	158
Number of primary schools	12,027	12,886	13,694	14,722	15,700	17,231
Female Scholars in Public Institutions.						
In arts colleges	244	279	318	353	406	469
In high schools*	14,864	16,884	18,515	21,085	22,234	23,254
In primary schools	689,471	785,511	832,962	909,266	929,846	993,198
Percentage of female scholars in public institutions to female population.	·63†	·70	·74	·81	8·9	·94
TOTAL SCHOLARS in public institutions { Male	4,930,084	5,253,065	5,559,841	5,823,215	5,762,417	5,871,184
TOTAL SCHOLARS in public institutions { Female	793,646	875,660	928,983	1,019,621	1,054,161	1,112,024
TOTAL SCHOLARS in public institutions Total	5,723,730	6,128,725	6,488,824	6,842,836	6,816,578	6,983,208
TOTAL SCHOLARS (both male and female) in all institutions.	6,345,582	6,780,721	7,149,663	7,518,147	7,448,419	7,617,496
Expenditure (in thousands of rupees).						
From provincial revenues	2,42,08	2,69,59	3,39,25	3,64,54	4,22,72	3,94,90
From local funds	1,00,32	1,05,80	1,23,08	1,47,91	1,66,79	1,80,38
From municipal funds	28,00	29,84	33,28	37,66	43,51	46,41
Total Expenditure from public funds	3,70,40	4,05,23	4,95,61	5,50,11	6,38,02	6,21,69
From fees	2,00,67	2,19,09	2,40,52	2,66,64	2,85,63	3,03,51
From other sources	1,47,61	1,61,61	1,65,96	1,85,49	1,73,05	1,83,09
GRAND TOTAL OF EXPENDITURE	7,18,68	7,85,93	9,02,09	10,02,24	10,91,70	11,08,29

* High schools include vernacular high schools also, in some provinces.

† The percentages for 1910-11, being reckoned on the new Census figures are slightly misleading for purposes of comparison with previous years. This remark applies throughout all the Tables.

‡ The statistics of Native States have been excluded from the Tables for 1914-15 and subsequent years.

of Hindus in the European and Asiatic languages and sciences," English being assigned the most prominent position. The moving spirit which led to the foundation of this institution was Raja Ram Mohan Roy who in the words of Mr. H. R. James in his important book "Education and Statesmanship in India," "incarnates the impulse which led thinking Indians to desire and work for English Education." From that time forward the far-sighted observer must have realised that a movement had begun which whether we would or not we could no longer check. The same phenomenon was witnessed on the Western side of India; and Mountstuart Elphinstone's Minute on Education, dated March 1824, deserves particular notice for its recognition of the necessity of introducing a knowledge of European sciences into any scheme of education as well as for its wise restraint in dealing with Oriental learning. For though his declared object was to establish English schools and encourage the natives in the pursuit of European sciences, he repudiates the idea that the purely Hindu side of education should be totally abandoned. In his own words: "It would surely be a preposterous way of adding to the intellectual treasures of a nation to begin by the destruction of its indigenous literature; and I cannot but think that the future attainments of the natives will be increased in extent as well as in variety by being, as it were, engrafted on their own previous knowledge and imbued with their own original and peculiar character." Elphinstone's interest in educational matters was sufficiently appreciated by the citizens of Bombay who in 1827, the year of his departure, resolved to found two professorships in his memory "to be held by gentlemen from Great Britain until the happy period when natives shall be fully competent to hold them." It is sufficiently clear not only that an interest had been aroused in English education but that some attempts had been made to meet the interest before 1835, though Lord Curzon may have given a just estimate of the situation at the Educational Conference of Simla in 1901 when he said: "Education there was; but it was narrow in its range, exclusive and spasmodic in its application, religious rather than secular, theoretical rather than utilitarian in character. Above all, it wholly lacked any scientific organisation and it was confined to a single sex."

GROWTH AND ORGANISATION OF ENGLISH EDUCATION IN INDIA.

It is, of course, just the possibility of engrafting modern western knowledge on the old Indian stocks that is open to doubt. Herein lies the significance of Macaulay's famous tirade on Oriental science, which deserves quoting for the contrast it forms to the juster estimate of Mountstuart Elphinstone. It is perhaps more offensive to Indian ears for the element of truth it contains, though the entirely unsympathetic form in which he expresses himself is a sufficient stumbling-block in itself. "The question before us," he writes, "is simply whether, when it is in our power to teach this language—English—we shall teach languages in which, by universal confession, there are no books on any subject to be compared to our own; whether, when we can teach European science, we shall teach systems which, by universal confession, wherever they differ from those of Europe, differ for the worse; and whether, when we patronise sound philosophy and true history, we shall countenance at the public expense, medical doctrines which would disgrace an English farrier, astronomy which would move laughter in the girls at an English boarding-school, history abounding with kings thirty feet high and reigns thirty thousand years long, and geography made up of seas of treacle and seas of butter." The reiterated phrase 'by universal confession' is beyond the mark; but Macaulay was surely right in his valuation of ancient Hindu science *as science* or history *as history*. Where he was surely wrong was in his implied condemnation of Indian literature *as literature*. From that point of view you might just as well condemn Homer for his mythology (as indeed Plato does in the Republic). Where, again, he was possibly wrong was in his vehement antipathy to the view that, if modern science is to be taught, it should be taught through the medium of Indian languages. Yet here too he represents an attitude which was fast becoming that of enlighted Indians. And, if there were no other reasons, the ultimate utility to the Government itself of Indians trained in the English language is a strong argument in his favour. This utilitarian motive for English education lurks often unconscious and unrecognised under the whole progress of Indian education —to its detriment as some think, for the great charge against the modern Indian student is that he regards a career in Government schools and colleges not so much as education and an end in itself as a mere means to more or less lucrative employment in Government offices. Be that as it may, we shall probably not be far wrong in saying that the famous Minute of 1835 was in spirit right but in expression wrong. Its result was that the Government of Lord William Bentinck made the following momentous Resolution: "His Lordship in Council is of opinion that the great object of the British Government ought to be the promotion of European literature and science among the natives of India, and that all the funds appropriated for the purposes of education would be best employed on English education alone."

Universities Established.

Macaulay's period of service on the Committee of Public Instruction (first formed in 1824) gave considerable impetus to the movement he advocated, as figures will show. Whereas the Committee had no more than fourteen institutions under its control in Bengal when he joined it, this number was more than trebled by the end of 1837, the larger part

INDIA.

The two tables given below afford useful comparisons with previous years and serve to illustrate the growth and expansion of education in India :—

(*a*) STUDENTS.

Year.	Public Institutions.			All Institutions (Public & Private).		
	Males.	Girls.	Total.	Males.	Girls.	Total
1886-87	*2,764,751	*206,108	2,970,859	*3,115,808	*277,736	3,343,544
1891-02	3,041,510	307,400	3,348,910	3,517,778	339,043	3,856,821
1896-97	3,428,376	360,006	3,788,382	3,954,712	402,158	4,356,870
1901-02	3,493,325	393,168	3,886,493	4,077,430	444,470	4,521,900
1906-07	4,164,832	579,648	4,744,480	4,743,604	645,028	5,388,632
1911-12	5,253,065	875,660	6,128,725	5,828,182	952,539	6,780,721
1915-16	5,871,184	1,112,024	6,983,208	6,431,215	1,186,281	7,617,496

* These figures do not include the girls in boys' schools, or the boys in girls' schools, as the case may be.

(*b*) EXPENDITURE.

Year.	Direct Expenditure.		Direct and Indirect.	
	Public Funds.	Total.	Public Funds.	Total.
	Rs.	Rs.	Rs.	Rs.
1886-87	*....	1,98,31,316	1,34,81,812	2,52,42,414
1891-92	1,07,55,368	2,40,93,149	1,56,18,184	3,05,19,632
1896-97	1,19,85,647	2,77,38,737	1,67,65,650	3,52,44,900
1901-02	1,26,28,586	3,06,37,633	1,77,03,968	4,01,21,462
1906-07	1,88,31,204	3,88,67,352	2,96,34,574	5,59,03,673
1911-12	2,57,57,212	5,30,41,277	4,05,23,072	7,85,92,605
1915-16	3,96,61,135	7,47,43,004	6,21,68,904	11,08,29,249

* No information.

being Anglo-Vernacular schools or colleges. Progress continued along these lines in Bengal and more slowly in other Presidencies, until in 1852 the numbers under instruction in Government colleges amounted to 25,372 of which 9,893 were for English education (James p.34). The increase of numbers must have been materially affected by a Resolution of Lord Hardinge's Government in 1844 in which it was stated that in the selection of candidates for public employment, preference would be given to those who had been educated in the newly fashioned type of institution. An adherent of the old-fashioned intellectual ideal of college life would see in this Resolution a fatal concession to the utilitarian view and a fatal misdirection of public attitude towards education.

Meanwhile educational institutions had so multiplied throughout India that the time was becoming ripe for the decisions arrived at in Sir Charles Wood's Despatch of 1854. The old idea had been that the education imparted to the higher classes of society would gradually 'filter down' to the lower classes. How little true it is that education could ever filter down to the masses in India by its own percolative properties is evident enough even now when our wide system of schools entirely fails to touch the majority of India's population. The Despatch of 1854 marks a departure from the 'filtration' policy and a recognition on the part of an enlightened Government of educational duties, even towards sections of the population who had never entertained the idea of Government obligations in their direction. The result of the Despatch was the formation of Departments of Public Instruction on lines which do not differ at all essentially from Departments of Public Instruction of the present day. They represent a direct desertion of the *laissez faire* or *filtration* policy, and an attempt on the part of Government to "combat the ignorance of the people which may be considered the greatest curse of the country." Another feature of the Despatch was an outline of a 'University' system, which formed the basis of the scheme adopted in 1857 when Acts were passed for the incorporation of three Universities, one for Calcutta, one for Bombay and one for Madras. As Lord Curzon said: "The Indian Universities may be described as the first fruits of the broad and liberal policy of the Education Despatch of 1854." He might have gone further and said that the scheme outlined in it not only originated universities but contained suggestions for their proper conduct whose value has only recently been understood. In its proposal of a distinction between "common degrees" and "honours" degrees it anticipates the actual procedure of at least one University, that of Bombay, by nearly sixty years.

Private Agencies.

The Despatch of 1854 and the orders based on it, together with later resolutions and modifications, organised education into something like the present system. Government took the whole thing into its own hands and established Universities, colleges, high schools and middle schools. Efforts were made to extend elementary education so as to reach the masses and also to establish a system of inspection with a view to guaranteeing the efficiency of private institutions which should be allowed grants-in-aid as well as Government Institutions themselves. Expansion under control sums up the aims of this combined system of grants-in-aid and inspection. As Mr. James puts it: "Local management under Government inspection stimulated by grants-in-aid, was to supplement and finally, perhaps, in large measure, to supersede direct management by Government." (p. 48) The latter part of the sentence may have been the inspiration of the Commission of 1882 appointed to inquire into the way in which the recommendations of the Despatch of 1854 had been carried out. The result of the Commission was to relax the control exercised by Government over education. Government's withdrawal was intended to refer only to secondary instruction. The idea was to encourage private enterprise in the founding of secondary schools. But though the recommendations of the Commission included much talk of conditions and cautions and of the necessity of maintaining a high standard, the addition of a further recommendation that the managers of aided schools and colleges be permitted, if they wished, to charge lower fees than Government schools of the same class led in the result to a general deterioration of standard. The recommendations of this Commission appear to some as a charter of inefficiency. They are the avenue to educational institutions run as a business proposition. Meanwhile, perhaps the most creditable feature of the Commission's Report was its insistence on the importance of Primary Education and its recommendation "that primary education be declared to be that part of the whole system of Public Instruction which possesses an almost exclusive claim on local funds set apart for education and a large claim on provincial revenues." The least creditable feature is its recommendation "that preference be given to that system which regulates the aid given mainly according to the results of examination." To pay by results is wilfully to encourage the cramming institution.

Great Expansion.

The period from 1882 to the beginning of the new century is one of phenomenal expansion. There was a general stampede for education, and no proper regard was paid to the standard or quality of the product. It is this period which if any deserves the opprobrium incurred by education in India. And it is the universities which stand out as the chief sinners. There can be no reasonable doubt that students were being turned out with degrees attached to their names who could not be regarded as educated from any respectable standpoint. As a man who is doubtful whether an act of his really is so praiseworthy as the general chorus of congratulation had led him to suppose, suddenly, with tremors at the thought of the revulsion of opinion that is sure to follow if he turns out to have done wrong, feels certain of his error, so our Governors and Chancellors and Vice-Chancellors of this period gradually arrived at the conviction that something was wrong with the seemingly excellent product

Statement of Educational Progress in MADRAS.

	1910–11.	1911–12.	1912–13.	1913–14.	1914–15	1915–16.
Area in square miles	141,866	142,491	No change.	No change.	142,330	No change.
Population { Male	20,152,916	20,389,666			20,382,955	
Population { Female	20,770,668	21,029,264			21,022,449	
Total Population	40,923,584	41,418,930			41,405,404	
Public Institutions for Males.						
Number of arts colleges	30	30	29	34	34	37
Number of high schools	172	168	171	176	182	183
Number of primary schools	23,426	24,044	25,223	26,018	26,917	28,166
Male Scholars in Public Institutions.						
In arts colleges	3,709	4,893	5,491	7,028	8,180	8,409
In high schools	69,543	71,294	77,581	85,364	93,367	97,993
In primary schools	766,884	829,331	889,393	952,035	999,685	1,048,380
Percentage of male scholars in public institutions to male population.	4·4	4·6	4·9	5·3	5·6	5·9
Public Institutions for Females.						
Number of arts colleges	1	2	2	2	3	3
Number of high schools*	32	33	32	35	35	35
Number of primary schools	900	1,162	1,281	1,443	1,527	1,619
Female Scholars in Public Institutions.						
In arts colleges	32	46	56	66	104	134
In high schools*	4,027	4,510	4,689	5,491	5,929	6,223
In primary schools	156,027	199,719	223,835	248,214	265,628	280,558
Percentage of female scholars in public institutions to female population.	·92	·99	1·1	1·2	1·3	1·4
TOTAL SCHOLARS in public institutions { Male	896,701	943,369	1,011,753	1,085,848	1,140,713	1,198,328
TOTAL SCHOLARS in public institutions { Female	190,861	209,517	234·197	259·706	277·187	293,617
Total	1,087,562	1,152,886	1,245.950	1,345,554	1,417,840	1,491,945
TOTAL SCHOLARS (both male and female) in all institutions.	1,215,725	1,280,065	1,362,182	1,469,945	1,542,955	1,615,159
Expenditure (in thousands of rupees).						
From provincial revenues	43,16	44,22	58,20	65,69	66,71	68,55
From local funds	11,24	12,28	17,27	(*a*) 23,94	29,20	30,30
From municipal funds	3,21	3,15	4,15	(*b*) 5,63	8,50	8,64
Total Expenditure from public funds	57,61	59,65	79,62	95,26	1,04,41	1,07,49
From fees	37,29	37,90	41,44	46,06	50,91	54,70
From other sources	32,78	38,10	36.56	38,67	38,21	44,33
GRAND TOTAL OF EXPENDITURE	1,27,68	1,35,65	1,57,62	1,79,99	1,93,53	2,06,52

* Include also vernacular high schools for girls.

(*a*) Includes provincial contribution of Rs. 13,07,994.

(*b*) Includes provincial contribution of Rs. 1,62,669.

of the Despatch of 1854 and the Commission of 1882. Criticism began from without, but finally it invaded the sphere of Convocation addresses. At last in 1901 the Vice-Chancellor of the University of Calcutta made this statement: "For the first time, the Chancellor asks the University to consider the possibility of constitutional reform." In September of that year an educational conference was convened at Simla by the Viceroy Lord Curzon. In 1902 the Indian Universities Commission was appointed and in 1904 an Act was passed to amend the law relating to the Universities of British India.

UNIVERSITIES ACT AND PRESENT SITUATION.

The Commission of 1882, which favoured the policy of withdrawing higher education from the control of Government within certain limits and of allowing colleges and secondary schools conducted by private enterprise to reduce their fees, though in many details it made admirable proposals, yet by its general policy led to a general inefficiency and lowering of standard in higher education. In some matters it anticipated all that has hitherto been done. For example, in suggesting that there should be two sides in secondary schools, "one leading to the entrance examination of the Universities, the other of a more practical character, intended to fit youths for commercial and other non-literary pursuits," it still anticipates Government action by many years. The Universities Commission of 1902 proposed to make the School Final examination, a preliminary test for certain professions and posts in Government service and to substitute it for the Matriculation as a general qualification, even, if possible, as a test of fitness to enter the University. The latest statement of Government policy (dated Feb. 1913) re-asserts and emphasises these proposals, which are an attempt to enforce the suggestion of the Commission of 1882. But the general relaxation of Government control seemed to Lord Curzon the radical evil of his day.

New Senates.

Not to speak of the lowering of efficiency consequent on the lowering of fees in schools and colleges by private enterprise, we may mention among the more glaring defects which Lord Curzon had to face the maladministration of the Universities due to the mistake of their composition. All kinds of people had crept into the Senates of Universities who from the true educational point of view had no business there. The numbers had become unwieldy so that it was impossible to get passed even necessary reforms. The progress of education was retarded and modern innovations simply ignored. As reconstituted the Universities have revised their regulations and though they have not ceased to be examining universities they have taken upon themselves the necessary function of inspecting the colleges affiliated to them. They have also received powers of becoming teaching bodies. Little has yet been done to make them that; but it may be judged from utterances in their Senates that they are becoming increasingly conscious of their possibilities or duties in this direction. In the last Resolution on Education (Feb. 1913), it was decided that the principle of an examining and affiliating University must still be maintained. Nevertheless a movement is promised in the direction of "new local teaching and residential Universities within each of the provinces in harmony with the best modern opinion as to the right road to educational efficiency." Under the present system it is no longer impossible to pass radical changes. The Senate of each University has been reduced to one hundred or less in number; and the Act lays down that in the election of members of the Syndicate, the executive body in the University, a certain number of those actively engaged in educational work should be selected. To quote from the Fifth Quinquennial Review- "the Colleges have defined rights of representation on the Syndicate, to this extent that among the elected members of the Syndicate a number not falling short by more than one of a majority must be heads or professors of colleges. One University has required by its regulations that a majority of the elected members of the Syndicate shall be heads or professors of Colleges." It is evident then that the working bodies in the Universities have been cleaned up and are now so constituted as to contain the obviously essential educational element.

Policy of 1913.

The influence of Lord Curzon on educational progress has been generally salutary. For though his reforms had the air of restriction and raised a general outcry in India—"the least that Lord Curzon was charged with was a deliberate attempt to throttle higher education in India." ("Indian Unrest" by Valentine Chirol)—it is now recognised by enlightened thinkers that all branches of education required careful review. Before any quantitative increase took place, it was necessary to reform the qualitative basis. A glance at the work done as summarised by the last Quinquennial Review will show how the machinery has been cleaned. The Universities are now respectable; secondary schools have been improved and placed under stricter conditions of recognition; attention, though insufficient, has been paid to the training of teachers; in primary schools examinations have been simplified, buildings improved, the pay of teachers raised, the courses of studies revised and widened. In these circumstances the Government Resolution of 1913 was justified in its aims to extend educational institutions on every side. It proposed to double the number of primary schools (a scheme which may be regarded as a compromise between the policy of *laissez faire* and that of compulsory education), and to encourage the establishment of a greater number of secondary schools on the lines of private enterprise by increased grants on conditions of submis-

Statement of Educational Progress in BOMBAY.

	1910–11.	1911–12.	1912–13.	1913–14	1914–15.	1915–16.
Area in square miles	188,826	188,826	No change.	No change.	123,070	No change.
Population { Male	14,006,375	14,013,522			10,252,255	
Population { Female	13,071,673	13,074,273			9,430,994	
Total Population	27,078,048	27,087,795			19,683,249	
Public Institutions for Males.						
Number of arts colleges	11	11	11	10	7	7
Number of high schools	117	129	138	141	110	111
Number of primary schools	11,267	11,609	12,169	12,790	9,929	9,797
Male Scholars in Public Institutions.						
In arts colleges	3,177	3,643	3,850	4,604	3,381	4,596
In high schools	39,569	41,325	45,385	47,427	37,600	37,615
In primary schools	593,197	630,427	678,031	701,496	551,987	545,461
Percentage of male scholars in public institutions to male population.	4·7	5·0	5·4	5·6	6·0	6·0
Public Institutions for Females.						
Number of arts colleges	..	..	..	..	..	..
Number of high schools	24	27	30	32	31	31
Number of primary schools	1,121	1,154	1,199	1,271	1,057	1,093
Female Scholars in Public Institutions.						
In arts colleges	81	76	91	93	94	106
In high schools	2,987	3,662	4,095	4,451	4,485	4,600
In primary schools	112,105	126,703	136,378	146,210	119,999	124,680
Percentage of female scholars in public institutions to female population.	·91	1·0	1·1	1·2	1·3	1·4
TOTAL SCHOLARS in public institutions { Male	667,469	707,328	761,435	790,303	620,364	619,789
TOTAL SCHOLARS in public institutions { Female	119,596	134,981	145,392	156,019	129,738	134,833
Total	787,065	842,309	906,827	946,322	750,602	754,622
TOTAL SCHOLARS (both male and female) in all institutions.	868,535	922,877	987,685	1,029,017	789,709	799,273
Expenditure (in thousands of rupees).						
From provincial revenues	46,60	53,98	68,82	70,54	82,98	74,77
From local funds	10,84	10,76	11,62	9,63	9,34	12,17
From municipal funds	9,54	10,14	9,85	10,43	11,15	12,34
Total Expenditure from public funds	66,98	74,88	90,29	90,60	1,02,57	99,28
From fees	24,49	26,27	26,36	29,51	27,25	29,21
From other sources	32,53	35,02	36,83	39,42	24,05	25,62
GRAND TOTAL OF EXPENDITURE	1,24,00	1,36,17	1,53,48	1,59,53	1,53,87	1,54,11

sion to Government inspection, recognition, and control. One of the most interesting features of the Resolution is Government's desire to develop the hostel system. In the words of the Resolution: "The Government of India desire to see the hostel system develop until there is adequate residential accommodation attached to every college and secondary school in India." Altogether the Resolution of February 1913 ranks as a notable pronouncement, ranging as it does over every conceivable topic, from the Universities to what is often called Female Education, with a depth of insight and a readiness to face the most complex problems of finance and organisation that augurs well for educational progress. There is reason to hope that our educational system in India will stand out as one of the most remarkable achievements in the history of imperial politics.

University Organisations.

These Universities are examining bodies with colleges affiliated to them. The Governor-General is the Chancellor of the University of Calcutta and the head of the provincial Government the Chancellor of each of the other Universities. The Vice-Chancellor is nominated by each head of Government. The *executive* body is the Syndicate which is now organised so as to contain a larger educational element. Over this body the Vice-Chancellor presides; all other members being elected by the various Faculties except the Director of Public Instruction who is a member *ex officio*. The secretarial work of all university business is done by an officer appointed by the Senate, the Registrar. The *legislative* body is the Senate which is divided into faculties, a Faculty being a section of the Senate appointed to control the work of a particular subject. The Faculties are in most cases those of Arts; science, law, medicine and engineering. There is an Oriental Faculty in the Punjab-University alone. Each of the main branches of study in a University is represented in addition by a Board of Studies, that is, an advisory body whose duties are to look after the curricula and recommend text books or books which represent the standard of knowledge required in the various examinations. The Senate as a whole consists of from 75 to 100 members, the majority of whom are nominated by Government, the remainder being elected by the Senate or its faculties or by the body of graduates of the University.

A Commission under the Chairmanship of Dr. M. E. Sadler, Vice-Chancellor of Leeds University, has been recently appointed to inquire into the affairs and future developments of Calcutta University.

UNIVERSITIES.

Constitution.—There are in India eight Universities with the following territorial limits.—

University.	Territorial Limits.	
	Province (including any Native State under its political control and any foreign possession included within its boundaries).	Native State or Colony.
Calcutta	Bengal, Burma and Assam ..	
Madras	Madras and Coorg	Hyderabad and Ceylon.
Bombay	Bombay and Sind	Baroda.
Allahabad	United Provinces of Agra and Oudh, the Central Provinces (including Berar) and Ajmer-Merwara.	The States included in the Rajputana and Central India Agencies.
Punjab	Punjab North-West Frontier Province, British Baluchistan and Delhi.	Kashmir and Baluchistan.
Mysore	.....	Mysore.
Benares †	.....	Benares.
Patna	Bihar and Orissa	.....

† The *Benares Hindu University* is denominational, and its jurisdiction is limited to Benares. The constitution and functions of the governing bodies differ from those of the other *Universities*. At Benares, administration is vested in a *Court* (which is the supreme body) and in a smaller *Council* (mainly elected by and from the *Court*) which is the *executive of the Court*; academic control is vested in a *Senate* and in an *executive Syndicate*. The *Court* appoints the *Chancellor* and the *Vice-Chancellor* through election.

Statement of Educational Progress in BENGAL.

	1910–11.	1911–12.	* 1912–13.	1913–14.	1914–15.	1915–16.
Area in square miles	124,492	No change.	78,699	No change.	No change.	No change.
Population { Male	27,436,187		23,365,225			
Population { Female	27,587,153		22,117,852			
Total Population	55,023,340	..	45,483,077		..	..
Public Institutions for Males.						
Number of arts colleges	29	29	31	31	31	29
Number of high schools	399	398	532	570	599	627
Number of primary schools	35,437	36,342	28,107	27,479	28,335	31,617
Male Scholars in Public Institutions.						
In arts colleges	8,255	9,635	12,791	14,633	15,808	17,100
In high schools	94,844	103,096	164,244	182,648	192,032	200,382
In primary schools	997,953	1,047,769	999,110	982,610	999,112	1,067,782
Percentage of male scholars in public institutions to male population.	4·7	4·9	6·1	6·2	6·3	6·4
Public Institutions for Females.						
Number of arts colleges	3	3	3	3	3	3
Number of high schools	21	19	21	26	28	26
Number of primary schools	3,052	3,124	6,798	7,038	7,627	8,793
Female Scholars in Public Institutions.						
In arts colleges	63	81	105	113	113	126
In high schools	2,301	2,423	3,090	3,653	3,764	3,691
In primary schools	146,223	158,616	205,784	210,137	225,130	259,640
Percentage of female scholars in public institutions to female population.	·63	·69	1·0	1·0	1·1	1·2
TOTAL SCHOLARS in public institutions { Male	1,290,621	1,364,946	1,435,452	1,452,313	1,483,843	1,504,648
TOTAL SCHOLARS in public institutions { Female	173,207	189,971	227,313	235,434	253,124	273,850
Total	1,463,828	1,554,917	1,662,765	1,687,747	1,736,967	1,778,498
TOTAL SCHOLARS (both male and female) in all institutions.	1,518,239	1,609,360	1,718,623	1,747,608	1,799,889	1,844,541
Expenditure (in thousands of rupees).						
From provincial revenues	50,16	54,76	64,97	64,99	87,03	78,99
From local funds	11,64	11,64	15,88	22,23	24,34	22,79
From municipal funds	1,58	1,70	1,56	1,70	1,68	1,71
Total Expenditure from public funds	63,38	68,10	82,41	88,92	1,13,05	1,03,49
From fees	61,02	67,88	86,62	95,50	1,04,77	1,10,43
From other sources	36,31	36,04	33,68	36,35	36,52	42,86
GRAND TOTAL OF EXPENDITURE	1,60,71	1,72,02	2,02,71	2,20,77	2,54,34	2,56,78

* No comparison is possible with previous years, as 1912-13 is the first year of the newly constituted Presidency of Bengal.

Courses and Examinations.

The Matriculation Examination is the test for entrance to a University. After matriculation, if the student decides to graduate in Arts, he must take a four years' course. After two years he takes the Intermediate Examination. After another two years he may appear for the Examination for Bachelor of Arts. The regulations with regard to *Honours* vary in the different Universities. In Calcutta the honours and pass courses are separate. In Bombay the honours student takes in addition to the pass three extra papers. In Madras the honours course is taken the year after and in addition to the pass course. The degree of Master of Arts requires a further examination (except in Madras) which is taken one or two years after the examination for the B. A. degree. If the student elects to take science, his course is one of four years. In some Universities he receives the degree of B. A.; in others a separate degree of B. Sc. Where the separation between Arts and Science is clearly defined, the student takes the Inter. Examination in Science two years after Matriculation, and two years after this examination appears for that of B.Sc. Those students who choose a professional course, *e.g.*, agriculture, medicine or engineering, must in most cases first attend an Arts College for one or two years before proceeding to the professional college. The student who has graduated as Bachelor at a University can graduate as a Bachelor of Law in two years.

The annual output of graduates is reckoned in the Sixth Quinquennial Review at 2742, and the proportion of students who graduate n the four main faculties is given as follows :—

Arts	85%
Science	20%
Medicine	9%
Engineering ..	4%

But it should be remembered that in some Universities the Arts degree is given for Science subjects.

The following table shows the percentages of success in the university examination most commonly taken(Indian Education in 1915-16):—

——	1906-07.	1911-12.	1915-16.
B. A.	39.2	56.8	51.1
B. Sc.	51.4	57.4	64.4
Intermediate (Arts.)	40.0	49.5	42.6
Intermediate (Science.)		49.8	52.7
Matriculation ..	44.2	53.6	52.8

Dacca University.

One of the most interesting features of the latest Government Resolution on education is the decision to found a teaching and residential university at Dacca. Government also profess themselves willing to sanction under certain conditions the establishment of similar universities as occasion may demand. These experiments may be regarded as an attempt to get away from the affiliating and examining type of University and to conform to that ideal of a University which requires it not only to confer degrees but to supervise the training of intellect and character as closely as possible. A University of this type will turn out graduates who may be trusted to have in their degree satisfactory credentials about their general character and ability. Under the existing system the University turns out graduates of whom it knows absolutely nothing beyond what it learns in examinations.

Colleges.

Affiliated to the University are colleges which the University have power to inspect and regulate. In 1915-16, the number of colleges affiliated to the Indian Universities is given as 199, of which 147 are Arts Colleges, 22 Law Colleges, five Medical, four Engineering, five Agricultural, one Commercial, two Veterinary, one Forestry and twelve Teachers' Training Colleges. The number of students in Arts Colleges was 45,818, and in all Colleges 55,489. All colleges, whether under Government or private management, are inspected by the Universities. Colleges receive financial aid from public funds, both provincial and Imperial. Under the Universities Act the Universities are empowered to make regulations about the residence of college students. The rule now is that students who do not reside with parent or guardian must reside either in a boarding house under supervision or in an approved lodging house. The result has been a larger provision of college residential buildings. The hostel system is definitely encouraged by Government and in the latest Resolution (Feb. 1913) Government express the desire to see the hostel system extended to all colleges and secondary schools. The number of female students in Art Colleges only was 469, in other colleges 131, making a total of 600.

Schools.

Government policy with regard to schools has been to provide a small number of institutions which are to be regarded as models for private enterprise. At the same time they insist on a careful inspection of all schools, whether they are run by municipalities or local boards, by private individuals or by missionary or other societies. Private enterprise is encouraged by an extensive system of grants-in-aid, which are dependent on the efficiency of the school and its expenditure on teachers and general equipment.

Secondary Schools.

There is some difficulty in the classification of schools, secondary and primary. Here the Fifth Quinquennial Review is followed as issuing from the Director General of Education. Secondary

Statement of Educational Progress in BIHAR and ORISSA.

	1911-12.	1912-13.	1913-14.	1914-15.	1915-16.
Area in square miles	98,170	98,170		83,233	
Population Male	18,032,708	18,032,708 No change.	No change.	16,859,929	No change.
Population Female	18,827,328	18,827,328		17,630,155	
TOTAL POPULATION	36,860,036	36,860,036		34,490,084	
Public Institutions for Males.					
Number of arts colleges	7	7	7	7	7
Number of high schools	93	95	91	91	94
Number of primary schools	21,990	22,452	22,509	21,339	21,233
Male Scholars in Public Institutions.					
In arts colleges	1,430	1,722	2,062	2,227	2,415
In high schools	25,402	28,110	28,712	30,887	32,391
In primary schools	567,341	592,242	597,962	557,041	547,721
Percentage of male scholars in public institutions to male population	3·7	3·9	3·9	4·0	4·0
Public Institutions for Females.					
Number of arts colleges	....	....	....	....	..
Number of high schools	3	3	3	3	3
Number of primary schools	1,259	1,498	1,845	2,060	2,169
Female Scholars in Public Institutions.					
In arts colleges	....	....	....	....	..
In high schools	286	287	317	337	326
In primary schools	78,076	82,254	91,567	93,385	95,396
Percentage of female scholars in public institutions to female population	·48	·51	·55	·63	·65
TOTAL SCHOLARS in public institutions Male	669,021	704,485	712,503	678,715	674,490
TOTAL SCHOLARS in public institutions Female	90,953	95,281	105,479	111,714	114,674
TOTAL	760,874	799,766	817,982	790,429	789,164
TOTAL SCHOLARS (both male and female) in all institutions	804,658	847,244	861,535	836,209	831,430
Expenditure (in thousands of rupees).					
From provincial revenues	19,55	23,11	33,71	36,72	31,41
From local funds	7,25	8,24	11,29	14,13	15,57
From municipal funds	52	52	91	1,08	1,28
TOTAL Expenditure from public funds	27,32	31,87	45,91	51,93	48,26
From fees	17,35	18,11	20,60	21,12	22,67
From other sources	11,27	11,90	13,41	12,74	13,63
GRAND TOTAL OF EXPENDITURE	55,94	61,88	79,92	85,79	84,56

Note:—The year 1912-13 is the first year of the newly constituted province of Bihar and Orissa. The figures for 1911-12 have been given for the sake of comparison only.

schools are divided into *English* and *Vernacular* in the first place. In the former English is a subject of instruction in the lower part and the medium of instruction in the upper part of the school. In the latter English is not taught in any way. In the second place these schools are divided into *high* and *middle* schools. In the former instruction in its highest branches leads to the standard of matriculation for a University; in the latter instruction is carried to a standard within three years of that in high schools. Thus there are four kinds of schools, English, High and Middle, and Vernacular, High and Middle. Of these the first two are often called Anglo-Vernacular as they combine instruction through the medium of the vernacular with instruction through the medium of English. But as there are so small a number of vernacular high schools that they are hardly worth including in a classification, and further as the vernacular middle schools are simply the highest stage of vernacular education and should therefore be included in the primary school system, the Review regards the distinction between English High and English Middle schools as a satisfactory classification. The distinction between these two is slight. A middle school in the words of the Review, "is nothing more than a high school with two or three top classes cut off." There are now two examinations which a boy may take at the end of his school career.—(1) The Matriculation examination, (2) the School Final.

Primary Schools.

Here again there is a difficulty of classification owing to the different systems prevailing in the different provinces. However they are divided generally according to grade into lower primary and upper primary. Middle vernacular schools, classed usually among secondary schools, are really only superior primary schools and bear little relation to the systems prevailing in secondary schools. Primary schools, as the Review points out, have been defined as the education of the masses through the vernacular. If the medium of instruction be taken as the differentiation, then clearly middle vernacular schools ought to be classed as primary. In 1913-14 the number of these schools was 116,650. In the Government Resolution of Feb. 1913 is found the following statement: "It is the desire and hope of the Government of India to see in the not distant future some 91,000 primary public schools added to the 100,000 which already existed for boys and to double the 4¼ millions of pupils who now receive instruction in them."

A minor modification has been introduced in the year under review (1915-16) regarding the classification of *makbabs, tols, pathshalas*, etc. Such of them as teach all or a reasonable part of the primary course are now classed as primary schools. Formerly, they generally appeared under the head "other Schools."

Primary to Anglo-Vernacular.

The transition from Primary to Anglo-Vernacular schools, that is, from primary to secondary education, is comparable to the transition from a Board school in England to a secondary school under the authority of a Municipality or County Council. But there is a difficulty owing to the different systems prevailing in different Presidencies. Nevertheless in all provinces a boy may begin in a vernacular primary school and pass from it to a secondary school. According to the Quinquennial Review, "in Bombay all children *must* begin in the vernacular schools before proceeding to the secondary schools; in other provinces children *may* do so." (The italics are ours). "The point at which the teaching of English is begun in the secondary schools is usually the highest point in the secondary school to which children from vernacular schools can be drafted; but in the United Provinces and the Punjab there are special arrangements made to facilitate the transition from the vernacular school system to the secondary school system of children who have pursued the vernacular school course to a higher point than this." (p. 97). It may be useful to describe the actual procedure in one Presidency. In Bombay, before proceeding to an Anglo-vernacular school a boy must have passed standard IV of a primary school and a girl standard III. The curriculum of the first three standards of an Anglo-Vernacular school is very similar to that of the last three standards of a vernacular school (Standards V, VI and VII)—except that in the Anglo-Vernacular school English is added as a subject, though not used in those standards as the medium of instruction.

Rural Schools.

In the provinces of Bengal, the Punjab and the Central Provinces a distinction is drawn between *rural* and *urban* primary schools. The curriculum differs according to this distinction. In the Central Provinces the distinction was, up to the time of the publication of the last Review, one of time mainly, to allow the boys to spend half their time in agricultural work. The object of rural schools is not so much to teach agriculture as to train the minds of prospective agriculturists in an elementary way. In 1905 an attempt was made in Bombay to introduce agricultural text-books, the effect of which may only have been to destroy the faith of the boys in their father's primitive methods without having any appreciable influence on the improvement of agricultural practices. About a year ago a meeting of educational inspectors decided against this experiment. The whole question of remodelling the rural school course has been reconsidered, and in Bombay at least that and the ordinary primary course have been brought closer together. A boy who starts in a rural school can now complete the whole primary course in the same time as a boy who starts in an urban school. The idea is that boys educated in rural schools should not be put at a disadvantage. At the same time—and this is important—an attempt has been made to make rural education, however elementary, form a system of elementary education which should be complete in itself. Hence the differences between rural education and ordinary primary education are unimportant and indefinite, in Bombay at least. The last Government Resolution declares it to be "not practicable at present in most

Statement of Educational Progress in the UNITED PROVINCES.

	1910–11.	1911–12.	1912–13.	1913–14.	1914–15.	1915–16.
Area in square miles	107,164	107,267	No change.	No change.	106,402	No change.
Population { Male	24,628,344	24,641,831			24,469,373	
Population { Female	22,565,048	22,540,213			22,365,735	
Total Population	47,193,392	47,182,044			46,835,108	
Public Institutions for Males.						
Number of arts colleges	31	32	32	35	36	35
Number of high schools	113	115	117	123	126	132
Number of primary schools	9,067	9,258	10,158	10,444	10,543	10,476
Male Scholars in Public Institutions.						
In arts colleges	4,180	4,602	4,869	5,286	25,784	6,195
In high schools	33,192	34,257	35,804	38,232	39,558	41,243
In primary schools	432,497	470,953	537,551	554,667	564,200	579,658
Percentage of male scholars in public institutions to male population.	2·1	2·3	2·6	2·7	2·8	2·8
Public Institutions for Females.						
Number of arts colleges	4	5	5	5	4	4
Number of high schools	20	20	21	22	21	22
Number of primary schools	941	957	1,008	1,067	1,084	1,064
Female Scholars in Public Institutions.						
In arts colleges	51	54	55	60	66	70
In high schools	1,824	1,804	1,984	2,187	2,080	2,227
In primary schools	37,365	41,340	42,943	46,693	47,916	48,884
Percentage of female scholars in public institutions to female population.	·19	·21	·22	·24	·25	·27
TOTAL SCHOLARS in public institutions. { Male	530,341	573,194	643,900	668,707	683,121	694,986
TOTAL SCHOLARS in public institutions. { Female	43,066	48,394	50,269	55,526	57,552	58,902
Total	573,407	621,588	694,169	724,233	740,673	753,883
TOTAL SCHOLARS (both male and female) in all institutions.	645,787	712,000	788,298	819,472	832,454	841,324
Expenditure (in thousands of rupees).						
From provincial revenues	31,33	37,50	48,04	46,74	54,60	46,61
From local funds	24,74	26,54	26,57	30,25	32,34	37,14
From municipal funds	3,17	3,54	3,72	4,95	5,05	4,60
Total Expenditure from public funds	59,24	67,58	78,33	8,194	91,99	88,35
From fees	18,59	20,50	23,32	25,07	27,50	28,86
From other sources	15,56	19,85	19,55	21,29	22,07	21,98
GRAND TOTAL OF EXPENDITURE	93,39	107,93	1,21,20	1,28,30	1,41,56	1,39,19

parts of India to draw any great distinction between the curricula of rural and of urban primary schools," but in the latter class of schools there is special scope for practical teaching of geography, school excursions, etc., and the nature study should vary with the environment and some other form of simple knowledge of the locality might advantageously be substituted for the study of the village map. As competent teachers become available a greater differentiation in the courses will be possible." Such differentiation has long been found a perplexing problem, and it may be doubted whether with wisdom any but indefinite differences can be introduced.

Professional and Technical Education.

Industrial institutions are to be found dotted about India, some maintained by Government, others by municipalities or local boards and others by private bodies. One of the most important institutions of this type is the Victoria Jubilee Technical Institute in Bombay. There is also the well-known Thomason College of Engineering at Roorkee, the College of Science at Poona, the Sibpur College in Bengal and the College of Engineering in Madras. There are Schools of Art in the larger towns of India, where not only architecture and the fine arts are studied but also practical crafts like pottery and iron-work. There is also a school of Forestry at Dehra Dun in the north of India. Besides these there are many medical schools and colleges which prepare students for the medical degrees of the various Universities and of which the Grant Medical College in Bombay may be taken as a good example. There are agricultural colleges, the most important of which is the Pusa Agricultural College and Research Institute, which trains experts in specialised branches of agricultural science, such as agricultural chemistry, economic botany, mycology and entomology. We may also mention the Indian Institute of Science at Bangalore, the product of generous donations by the Tata family. Two institutions mark the progress of educational interest in the Bombay Presidency, the Government Institute of Science—for whose capacious building (temporarily used as a hospital) the Government is indebted to the generosity of Sir Cowasji Jehangir, Sir Jacob Sassoon, and Sir Currimbhoy Ebrahim—and the College of Commerce, instituted to supply teaching in connection with the establishment of a Faculty of Commerce in the University.

Colleges for Teachers.

There are training colleges for secondary teachers in various parts of India, and what are called in some cases Training Colleges, in others normal schools, for the training of vernacular teachers. As there has been considerable dissatisfaction on account of the defective qualities and pay of teachers in schools, Government are now wakening to the importance of paying more careful attention to these institutions and the last Resolution provides for a better scheme of pay for teachers. In 1917, a training grant of 30 lakhs was set aside by the Government of India for the improvement of training facilities and the pay of teachers.

Education of Girls.

Hitherto little attention has been paid to this important branch of education, but during the past year the Government of India have set about making enquiries on the subject. Even in the latest Resolution nothing is definitely proposed, though certain lines are laid down for guidance of enterprise in this direction. However there do exist schools and colleges for girls, while a number of the female sex are educated at institutions common to both sexes. Arts Colleges, Medical Colleges and the like admit both male and female students, and a small percentage of women attend them. In those Presidency Towns, however, where there are no colleges specially for women, it seems to be generally recognised that there ought to be, particularly when one remembers how important it is to bring the influential class of women and mothers round to some sympathy with modern thought and ideals. It may be presumed that Government will pay very limited attention to this side of education until Indians themselves demand such a move. Most Indians object to invasions on their family life and take a different attitude to women from that of Western races. Still there are schools for girls and female inspectresses employed by Government.

European Schools.

There are schools for Europeans and Eurasians in India and they are inspected by Government inspectors specially appointed for the control of European schools and for the allocation of grants to schools under their sphere of influence. The education of the domiciled communities has been found a singularly perplexing problem, and in 1912 a special conference was summoned to consider the matter. The difficulty is that they are a thing apart from the general system of education devoted to Indians proper.

Chiefs' Colleges.

There are four Chiefs' Colleges in India, viz:—Mayo College, Ajmer; Aitchison College, Lahore; Daly College, Indore; and Rajkumar College, Rajkot. These Colleges have been established especially to impart education to the sons of Indian Chiefs and Rulers of States, and are doing good work in that direction.

Educational Services.

These are divided into (*a*) the Indian Educational Service, (*b*) the Provincial Educational Service, (*c*) the Subordinate Educational Service.

(*a*) Indian Educational Service.— The Indian Educational Service is comprised of distinguished graduates of Universities of the United Kingdom, chiefly from Oxford and Cambridge. At the head of the Educational Department in each Presidency is the Director of Public Instruction, who is a member of the Service drawn from one of its branches and in all cases a member of the Legislative Council of his Presidency. Under him are Educational Officers in three branches, (*a*) Inspectors, (*b*) Principals and Professors of Colleges, (*c*) Headmasters of High Schools. Under the present system it is still possible for an English graduate sent out from home to start in one branch of the service and pass

Statement of Educational Progress in the PUNJAB.

	1910–11.	1911–12.	1912–13.	1913–14.	1914–15.	1915–16.
Area in square miles	97,213	No change.	No change.	No change.	96,685	99,251
Population { Male	10,992,067				10,770,707	10,770,705
Population { Female	8,982,889				8,807,252	8,807,254
Total Population	19,974,956				19,577,959	19,577,959
Public Institutions for males.						
Number of arts colleges	11	11	9	9	9	9
Number of high schools *	98	101	102	111	125	130
Number of primary schools	3,321	3,417	3,689	4,158	4,552	4,757
Male Scholars in Public Institutions.						
In arts colleges	2,270	2,659	2,779	3,163	3,496	3,873
In high schools *	44,893	47,740	46,999	47,946	50,521	51,261
In primary schools	164,081	179,410	197,230	219,796	227,890	234,132
Percentage of male scholars in public institutions to male population.	2·3	2·5	2·7	2·9	3·1	3·2
Public Institutions for Females.						
Number of arts colleges	....	....	....	1	1	1
Number of high schools	15	16	15	16	17	18
Number of primary schools	599	637	709	793	878	922
Female Scholars in Public Institutions.						
In arts colleges	....	....	3	13	18	20
In high schools	1,244	1,605	1,526	1,721	241	2,453
In primary schools	26,174	29,269	32,118	37,199	38,757	41,166
Percentage of female scholars in public institutions to female population.	·36	·41	·44	·51	·54	·59
TOTAL SCHOLARS in public institutions { Male	257,432	279,492	298,614	326,182	338,917	350,675
TOTAL SCHOLARS in public institutions { Female.	32,186	36,675	39,838	45,631	47,832	52,278
Total	289,618	316,167	337,852	371,813	386,749	402,953
TOTAL SCHOLARS (both male and female) in all institutions.	346,940	381,113	410,491	439,956	445,909	463,157
Expenditure (in thousands of rupees).						
From provincial revenues	18,63	22,79	29,79	28,24	34,17	35,03
From local funds	12,31	12,44	16,17	21,96	24,39	27,87
From Municipal Funds	4,05	3,53	3,96	4,57	5,26	6,00
Total Expenditure from public funds	34,99	38,76	49,92	54,77	63,82	68,90
From fees	15,20	17,75	20,67	22,22	23,82	25,89
From other sources	10,38	12,14	13,61	† 16,23	19,55	17,88
GRAND TOTAL OF EXPENDITURE	60,57	68,65	84,20	93,22	1,07,19	1,12,17

* Includes also vernacular high schools.

† Include an Imperial contribution of Rs. 2,83,742.

from one to another at the will of Government. All, with some few exceptions, start at the pay of Rs. 500 per mensem with an annual increment of Rs. 50 per mensem, and go up to Rs. 1,000 per mensem, certain Directors of Public Instruction being put on to the salary of Rs. 2,500 per mensem. A small number of personal allowances was arranged in 1896, when the service was re-organised and received its title. There are lower allowances of Rs. 200 to Rs. 250, higher allowances of Rs. 250 to Rs. 500, and an allowance of Rs. 100 after fifteen years of approved service to those who do not get any of the other allowances. Except for the Director of Public Instruction, the limit of the prospect of a member of the Indian Educational Service is Rs. 1,500 a month, the average prospects being considerably less. There is no short service pension. Schemes are on foot to improve the prospects of the service. Hitherto this service which is in reality one of the most important in the country has not been rightly estimated, though its members are as a rule men of real culture. Hence the great difficulty of recruitment. The number of posts in this service in 1917 throughout India was 255. It is clear that the Service is understaffed, if one considers the range and importance of its work. Hitherto higher educational work has been little appreciated in India, particularly by Englishmen. Now-a-days much is said of its importance, but little done for those who carry it out.

At the head of all Educational departments in India, at the seat of Government, is the Member for Education who sits in the Viceroy's Executive Council, and supervises the work of the Department of Education. Owing to the importance of the work carried out in this Department, there are Assistant instead of Under Secretaries.

(*b*) Provincial Educational Service.—In this service also are found principals and professors of colleges, headmasters and inspectors of schools, and, in addition, translators to Government and members engaged in other exceptional posts. This service is composed of Indians and recruited in India, the pay scheme being arranged on a much lower scale than that of the Indian Service in accordance with the qualifications and the cheaper rates of living of natives of India. The maximum pay is Rs. 700, the minimum pay Rs. 200. There is a general division between two branches, collegiate and general.

(*c*) Subordinate Educational Service.—The majority of this service are headmasters (a few), assistant deputy inspectors and all the assistant masters in Government high and middle schools. In Bengal a number of poorly paid teachers have been converted into a "lower subordinate service." The pay and prospects of this service are not good, and much complaint is made of the inferior nature of the teaching in schools run by its members. In 1907 the figures for this service stood at 6,025. The maximum pay of this service is somewhere about Rs. 400. The minimum pay used to be Rs. 30, but it is now Rs. 40 per mensem.

STATISTICAL RESULTS.

The statistical table of educational progress in British India published for 1915-16 gives the following results:—

The grand total of pupils in all institutions in 1915-16 was 7,617,496. The largest increases occurred in Madras (72,204), Bengal (44,652), Punjab (17,248) and Burma (12,654).

Note (*i*).—In 1914-15, it was decided to exclude figures for certain Native States, which had been previously included in the educational statistics of British India. This fact renders comparisons with past years difficult. In 1914-15, it wrought a decrease of about 4,000 institutions, a third of a million pupils and some 30 lakhs of expenditure.

Note (*ii*).—The percentages of pupils are now shown, not against 15 per cent. of the population, but against the population as a whole. (The population of school-going age was formerly reckoned at 15 per cent. of the population).

The percentage of pupils in public institutions to population has risen in the case of boys to 4·7 in that of girls to 94.

The percentage to population of pupils in all institutions (both public and private) for each of the under-mentioned years is as follows:—

Year.	Males	Females.	Total.
1911-12	4.5	·76	2·7
1912-13	4.7	·80	2·8
1913-14	4.9	·88	2·9
1914-15	5.1	·95	3·0
1915-16	5.2	1·0	3·1

The figures for higher institutions in 1915-16 were as follows:—

	Males.	Females.	Total.
In Colleges	54,889	600	55,489
In High Schools ..	502,681	23,254	525,935
In Middle Schools ..	532,217	70,251	602,468

The total of those under primary instruction in public and private schools including primary departments of secondary and other public schools and private institutions where a vernacular is taught was 6,669,962 (5,568,011 boys, 1,101,951 girls).

The number of those under training for the profession of teaching has risen to 18,506 (774 in colleges, 17,732 in schools).

The number of pupils in technical and industrial schools has decreased to 12,685.

The number of pupils in schools for Europeans and the domiciled community now stands at 39,481. The total number of European and Anglo-Indian students, however, is 39,645.

The number of Mahomedan pupils amounts to 1,767,783, of whom 5,992 are in colleges.

Expenditure.

The total expenditure in 1915-16 was Rs. 11,08,29,249, an increase of nearly 16¼ lakhs on that of the preceding year. Of the total, roughly 621 lakhs are met from public funds (against 633 lakhs in the preceding year), *viz.*, 395 lakhs from provincial, 180 lakhs from district and 46 from municipal funds. Of the 487 lakhs from private sources, fees contributed 183 lakhs.

Statement of Educational Progress in BURMA.

	1910–11.	1911–12.	1912–13.	1913–14.	1914–15.	1915–16.
Area in square miles	236,738	230,839	No change.	No change.	No change.	No change.
Population { Male	6,144,301	6,183,494				
Population { Female	5,913,604	5,931,723				
Total Population	12,057,905	12,115,217				
Public Institutions for Males.						
Number of arts colleges	2	2	2	2	2	2
Number of high schools*	39	36	39	47	56	65
Number of primary schools	4,895	4,764	4,733	5,046	6,029	6,492
Male Scholars in Public Institutions.						
In arts colleges	261	302	336	446	565	633
In high schools*	10,368	10,034	10,888	14,244	15,923	17,265
In primary schools	124,377	125,552	126,877	143,422	161,921	167,563
Percentage of male scholars in public institutions to male population.	3·0	3·1	3·2	3·6	4·1	4·2
Public Institutions for Females.						
Number of arts colleges	..	..	..	..	..	..
Number of high schools	11	11	13	14	14	14
Number of primary schools	553	552	588	599	740	855
Female Scholars in Public Institutions.						
In arts colleges	17	22	8	7	9	12
In high schools	1,974	2,135	2,440	2,811	2,918	3,257
In primary schools	53,291	55,854	57,479	70,324	77,273	79,767
Percentage of female scholars in public institutions to female population.	1·2	1·3	1·4	1·6	1·8	1·9
TOTAL SCHOLARS in public institutions. { Male	188,129	194,401	202,108	227,035	252,623	263,704
TOTAL SCHOLARS in public institutions. { Female	71,032	75,909	80,325	97,050	108,531	113,301
Total	259,161	270,310	282,433	324,085	361,154	377,000
TOTAL SCHOLARS (both male and female) in all institutions.	429,992	445,255	459,593	504,928	550,500	563,154
From provincial revenues	16,71	18,98	22,31	25,72	29,70	27,65
From local funds	4,08	4,22	4,44	(*a*) 5,67	6,92	6,40
From municipal funds	3,48	3,68	3,88	(*b*) 4,47	4,67	4,78
Total Expenditure from public funds	24,27	26,88	30,63	35,86	41,29	38,23
From fees	14,53	15,09	16,53	18,49	19,80	20,32
From other sources	4,88	5,40	6,20	7,20	8,26	6,59
GRAND TOTAL OF EXPENDITURE	43,68	47,37	53,36	61,55	69,35	65,14

(*a*) Includes Rs. 72,817 being provincial contribution to District Cess Fund.
(*b*) Includes Rs. 57,772 being provincial contribution to Municipalities.

* Include also vernacular high schools.

Among the larger provinces, the highest expenditure was in Bengal, 257 lakhs.

Principal developments.—In the year 1912-13, the following additional allotments from Imperial funds were announced for education in provinces and politically administered areas—319 lakhs non-recurring from the surplus revenue of that year, and 55 lakhs recurring from the revenue of the year 1913-14.

The following table shows the various Imperial grants made up to the end of 1915-16 (Indian Education in 1915-16):—

Grants of		Lakhs of rupees.	
		Recurring.	Non-recurring.
1910-11	.. ..	..	93·00
1912-13	.. ..	60·00	3,87·18
1913-14	.. Old ..	60·00	..
	.. New .	55·00	·95
1914-15	.. Old ..	1,15·00	..
	.. New .	9·00	12·265
1915-16	.. Old ..	1,24·00	..
	.. New .	..	..
	Total . ..	4,23·00	4,93·38

The developments of the five preceding years 1907–1912 have been described in the quinquennial review.

Among special features of the period are the establishment of a Faculty and the scheme for a college of Commerce in the Bombay University. A generous gift of 10 lakhs to the University of Calcutta was made by Dr. Rash Bihari Ghose. A committee worked out a scheme for the Dacca University, a project which has subsequently received the general approval of the Secretary of State. The reports on education in the various provinces show that in Madras the rules for grant-in-aid have been made more elastic and the amount given as grant-in-aid has increased by nearly 5 lakhs. In other provinces improvements have been made in secondary education; and in the Bombay Presidency the pay of assistant teachers in Government secondary schools has been increased. The pay of primary school teachers has likewise been improved; in the Punjab, graded scales of salaries from Rs. 12 to Rs. 30 a month are being generally introduced; in Bihar and Orissa the stipends paid to aided school teachers have been regulated; in the Central Provinces a sum has been earmarked for rendering pensionable the pay of all masters drawing Rs. 11 and over. Among developments in Muhammadan education the foundation of an Islamia College at Peshawar has been conspicuous. Other important committees deliberated during the period on primary education the education of Muhammadans and other important subjects.

Recent Developments.

The main developments have been described in the resolution which appeared in the *Gazette of India* published on the 22nd February 1913, which also laid down the policy of the Government of India. The year witnessed the assertion at the Imperial Durbar by command of His Most Gracious Majesty the King Emperor of the predominant claims of educational advancement, the announcement of a recurring Imperial grant of 50 lakhs for the promotion of truly popular education, and the high expression of his hopes and wishes for the expansion and improvement of education delivered by His Majesty the King-Emperor in graciously receiving an address presented by the Calcutta University. In addition to the recurring grant of 50 lakhs a recurring grant of 10 lakhs was sanctioned for university and higher education, and a non-recurring grant of 65 lakhs was also made. There has been expansion in expenditure accompanied by an increase of those under instruction.

Other features of recent years have been the collection of materials for the preparation of extensive schemes for the spread of elementary education, and, in certain provinces, for the improvement of secondary and female education: the growth of new ideas regarding university teaching, which has resulted in the proposal for a teaching and residential university at Dacca, schemes for the establishment of Universities at Nagpur and Rangoon, and the establishment of Professorships, Readerships, and Lecturerships in Universities like those of Calcutta and Bombay; the generous gifts of Sir T. N. Palit and Dr. Rash Behari Ghose to the University of Calcutta; the creation of a department of industries at Madras as a portion of the scheme of industrial training and development; the sanctioning of an industrial scheme for the Central Provinces; the institution of a college of commerce in Bombay; an inquiry carried out by Colonel Atkinson and Mr. Dawson into the question of bringing technical institutions into closer touch with the employers of labour; the institution of an Oriental Research Institute; and the conference held in July 1912 on the education of the domiciled community.

Important action has been taken in the *United Provinces* where vernacular has been made the sole medium up to the Middle standard. The school-leaving certificate has been established in *Burma*, and a scheme has been framed for *Ajmer-Merwara*, *Bombay* and the *Punjab* have made systematic arrangements for the medical inspection of pupils.

The war has not been without its effects on education in India. The ranks of those engaged in educational work have to some extent been depleted, and great difficulty has naturally arisen in recruiting professors and inspectors from England. Financial stringency caused by the war has led to a general policy of economy. But, in spite of all these adverse circumstances, general progress has not been impeded. The figures of increase, given elsewhere, are not unsatisfactory. It may, however, be said that the general expansion of education, though far from checked, has been to a certain extent retarded.

Statement of Educational Progress in ASSAM.

	1911-12.	1912-13.	1913-14.	1914-15.	1915-16.
Area in square miles	61,471	61,471	No change.	53,015	No change.
Population .. Male	3,638,287	3,638,287		3,467,621	
Female	3,421,570	3,421,570		3,246,014	
TOTAL POPULATION ..	7,059,857	7,059,857		6,713,635	
Public Institutions for Males.					
Number of arts colleges ..	2	2	2	2	2
Number of high schools ..	27	27	29	30	32
Number of primary schools ..	3,409	3,534	3,760	3,926	3,859
Male Scholars in Public Institutions.					
In arts colleges	295	300	441	550	592
In high schools	8,723	9,985	11,186	12,223	12,182
In primary schools	132,151	138,236	150,584	162,291	161,612
Percentage of male scholars in public Institutions to male population	4.3	4.6	5.1	5.7	5.7
Public Institutions for Females.					
Number of arts colleges ..	....	....	....	....	..
Number of high schools ..	1	2	2	2	2
Number of primary schools ..	242	256	300	345	333
Female Scholars in Public Institutions!					
In arts colleges	....	....	1	1	1
In high schools	201	352	411	434	418
In primary schools	16,836	17,845	20,932	24,587	24,730
Percentage of female scholars in public institutions to female population	.52	.55	.66	.82	.84
TOTAL SCHOLARS in public institutions Male ..	159,101	168,364	185,386	199,891	199,524
Female	17,931	19,085	22,747	26,761	27,321
TOTAL ..	177,032	187,449	208,133	226,652	226,845
TOTAL SCHOLARS (both male and female) in all institutions	182,112	194,288	215,141	233,888	237,485
Expenditure (in thousands of rupees).					
From provincial revenues ..	5,87	7,71	10,76	12,33	12,28
From local funds	5,03	5,82	6,25	7,81	7,26
From municipal funds	14	16	33	44	43
TOTAL Expenditure from public funds	11,04	13,69	17,34	20,58	19,97
From fees	2,79	3,02	3,50	3,75	4,39
From other sources	2,26	2,33	2,44	2,21	2,52
GRAND TOTAL OF EXPENDITURE	16,09	19,04	23,28	26,54	26,88

Note:—The year 1912-13 is the first year of the newly constituted province of Assam after the re-distribution. The figures for 1911-12 have been given for the sake of comparison only.

Statement of Educational Progress in CENTRAL PROVINCES and BERAR.

	1910–11.	1911–12.	1912–13.	1913–14.	1914–15.	1915–16.
Area in square miles	130,174	117,935	No change.	No change.	99,823	No change.
Population { Male	7,764,777	7,766,007			6,930,392	
Population { Female	7,832,712	7,833,993			6,985,916	
Total Population	15,597,489	15,600,000			13,916,308	
Public Institutions for Males.						
Number of arts colleges	3	4	4	4	4	4
Number of high schools *	35	35	39	40	42	43
Number of primary schools	3,094	3,195	3,471	3,846	3,727	3,699
Male Scholars in Public Institutions.						
In arts colleges	514	608	705	860	1,013	1,081
In high schools *	3,236	3,102	3,547	3,624	4,069	4,630
In primary schools	216,750	228,255	248,439	274,664	257,980	256,187
Percentage of male scholars in public institutions to male population.	3·4	3·6	3·8	4·2	4·5	4·5
Public Institutions for Females.						
Number of arts colleges	..	..	..	..	..	..
Number of high schools	4	5	7	7	7	7
Number of primary schools	301	309	322	320	318	323
Female Scholars in Public Institutions.						
In arts colleges	..	..	..	..	1	..
In high schools	23	28	51	43	46	59
In primary schools	26,033	27,948	30,389	33,051	31,533	32,504
Percentage of female scholars in public institutions to female population.	·36	·39	·42	·46	·49	·51
TOTAL SCHOLARS in public institutions. { Male	269,062	282,257	302,077	328,844	312,755	312,308
TOTAL SCHOLARS in public institutions. { Female	28,452	30,729	32,854	35,960	34,388	35,394
Total	297,514	312,986	334,931	364,804	347,143	347,702
TOTAL SCHOLARS (both male and female) in all institutions.	297,620	313,205	335,248	365,128	347,666	350,381
Expenditure (in thousands of rupees).						
From provincial revenues	11,48	10,64	11,87	13,82	14,03	15,28
From local funds	11,05	12,08	13,88	14,15	15,42	17,56
From municipal funds	1,88	2,93	3,70	3,53	4,27	5,37
Total Expenditure from public funds	24,41	25,61	29,45	31,50	33,72	38,21
From fees	2,29	2,84	3,67	3,91	4,72	5,39
From other sources	4,15	4,16	4,76	5,89	5,61	4,25
GRAND TOTAL OF EXPENDITURE	30,85	32,65	37,88	41,30	44,05	47,85

* Include also Vernacular high schools.

Statement of Educational Progress in the NORTH-WEST FRONTIER PROVINCE.

	1910–11.	1911–12.	1912–13.	1913–14.	1914–15.	1915–16.
Area in square miles	13,193	No change.	No change.	No change.	No change.	No change.
Population { Male	1,182,102					
Population { Female	1,014,831					
Total Population	2,196,933					
Public Institutions for Males.						
Number of arts colleges	1	1	1	2	2	2
Number of high schools	12	12	12	14	14	16
Number of primary schools	264	260	335	440	539	584
Male Scholars in Public Institutions.						
In arts colleges	22	38	37	77	148	146
In high schools	4,486	5,146	5,438	4,997	4,905	5,418
In primary schools	13,034	14,129	16,899	22,327	25,601	26,328
Percentage of male scholars in public institutions to male population.	1·8	1·9	2·3	2·8	3·1	3·2
Public Institutions for Females.						
Number of arts colleges	..	..	..	..	..	..
Number of high schools	..	..	..	..	..	..
Number of primary schools	27	28	29	30	38	40
Female Scholars in Public Institutions.						
In arts colleges	..	..	..	..	..	..
In high schools	..	..	..	..	..	..
In primary schools	1,775	1,925	2,044	2,239	2,850	2,918
Percentage of female scholars in public institutions to female population.	·21	·22	·24	·25	·32	·34
TOTAL SCHOLARS in public institutions. { Male	20,919	23,236	27,344	33,124	37,151	38,778
TOTAL SCHOLARS in public institutions. { Female	2,093	2,247	2,396	2,619	3,280	3,509
Total	23,012	25,483	29,740	35,743	40,431	42,287
TOTAL SCHOLARS (both male and female) in all institutions.	31,891	34,911	38,472	44,445	47,744	49,512
Expenditure (in thousands of rupees).						
From provincial revenues	‡ 1,35	99	† 3,68	3,10	2,80	2,86
From local funds	92	1,42	† 3,06	2,11	2,39	2,72
From municipal funds	61	68	† 1,76	65	84	69
Total Expenditure from public funds	2,88	3,09	8,50	(a) 5,86	6,03	6,27
From fees	47	56	65	82	93	1,04
From other sources	53	63	47	3,58	2,69	2,12
GRAND TOTAL OF EXPENDITURE	3,88	4,28	9,62	10,26	9,65	9,43

* Imperial Revenues.
‡ Including Rs. 58,215 from Imperial Revenues.
† Including Rs. 2,60, 1,60 and 1,04 in thousands respectively from Imperial grants.
(a) Including Rs. 2,44 (in thousands) from Imperial grants.

Statement of Educational Progress in COORG.

	1910–11.	1911–12.	1912–13.	1913–14.	1914–15.	1915–16.
Area in square miles	No change.	1,582	No change.	No change.	No change.	No change.
Population—Male		97,279				
Population—Female		77,697				
TOTAL POPULATION		174,976				
Public Institutions for Males.						
Number of arts colleges	....	....	....	....	....	....
Number of high schools	1	1	1	1	1	1
Number of primary schools	81	80	84	93	94	91
Male Scholars in Public Institutions.						
In arts colleges	....	....	....	....	....	....
In high schools	226	206	201	226	249	290
In primary schools	3,721	3,970	4,523	4,965	5,118	4,797
Percentage of male scholars in public institutions to male population.	4·1	4·4	5·0	5·5	5·7	5·4
Public Institutions for Females.						
Number of arts colleges	....	....	....	....	....	....
Number of high schools	....	....	....	....	....	....
Number of primary schools	6	6	6	6	7	7
Female Scholars in Public Institutions.						
In arts colleges	....	....	....	....	....	....
In high schools	2	1	1	....	....	....
In primary schools	1,721	1,773	1,943	2,184	2,247	2,259
Percentage of female scholars in public institutions to female population.	2·2	2·4	2·6	2·9	3·0	3·0
TOTAL SCHOLARS in public institutions.—Male	4,099	4,342	4,909	5,390	5,577	5,314
TOTAL SCHOLARS in public institutions.—Female	1,811	1,681	2,033	2,294	2,360	2,365
Total	5,910	6,203	6,942	7,684	7,937	7,679
TOTAL SCHOLARS (both male and female) in all institutions.	6,640	6,811	7,545	8,039	8,301	7,985
Expenditure (in thousands of rupees).						
From provincial revenues	61	30	75	53	63	63
From local funds	12	13	13	17	18	17
From municipal funds	1	2	2	2	2	7
Total Expenditure from public funds	74	54	90	72	83	87
From fees	12	13	13	14	16	16
From other sources	6	6	7	5	5	7
GRAND TOTAL OF EXPENDITURE	92	73	110	91	104	1,10

Statement of Educational Progress in DELHI

	1912-13.	1913-14.	1914-15.	1915-16.
Area in square miles	528			574½
Population .. { Male	221,360	No change.	No change.	220,342
Population .. { Female	175,637			182,207
TOTAL POPULATION ..	396,997			411,549
Public Institutions for Males.				
Number of arts colleges	2	2	2	2
Number of high schools	6	6	6	6
Number of primary schools	69	76	82	87
Male Scholars in Public Institutions.				
In arts colleges	219	236	289	309
In high schools	1,830	1,780	1,915	2,011
In primary schools	3,907	4,877	5,181	5,365
Percentage of male scholars in public institutions to female population ..	3·0	3·4	3·7	3·8
Public Institutions for Females.				
Number of arts colleges	....	....	....	....
Number of high schools	2	....	....	....
Number of primary schools	9	10	10	13
Female Scholars in Public Institutions.				
In arts colleges	....	....	....	....
In high schools	155	....	....	....
In primary schools	461	516	543	701
Percentage of female scholars in public institutions to female population ..	·54	·66	·99	1·0
TOTAL SCHOLARS in public institutions .. .. { Male ..	6,634	7,580	8,250	8,640
TOTAL SCHOLARS in public institutions .. .. { Female .	944	1,156	1,751	1,980
TOTAL ..	7,578	8,736	10,001	10,620
TOTAL SCHOLARS (both male and female in all institutions)	11,275	12,933	13,200	14,085
Expenditure (in thousands of Rupees).				
From provincial revenues	1,22	69	1,92	1,44
From local funds	9	27	33*	42
From Municipal funds	14	47	55†	50
TOTAL EXPENDITURE from public funds.	1,45	1,43	2,80	2,36
From fees	41	83	91	95
From other sources	41	97	1,08	1,24
GRAND TOTAL OF EXPENDITURE ..	3,27	2,23	4,79	4,55

* Includes Provincial contribution of Rs. 12,576.
† Includes Provincial contribution of Rs. 9,763.

The Benares Hindu University.

There were originally three distinct movements in favour of founding a Central Hindu University. In the first place, in 1904, the Hon. Pandit Madan Mohan Malaviya made proposals which were confirmed and approved by the Sanatan Dharma Mahasabha or Congress of Hindu Religion which met at Allahabad in January 1906. About that time, Mrs. Annie Besant also put forward the idea of establishing a University at Benares and applied to the Government for a charter. In the third place, a number of Hindu gentlemen under the guidance of the Hon. Maharaja Sir Rameshwar Singh Bahadur, K.C.I.E., of Darbhanga were considering the possibilities of starting an educational institution at Benares. The leaders of these movements soon recognised that a union of forces was essential, and in April 1911 Mrs. Besant and the Hon. Pandit Madan Mohan Malaviya met at Allahabad to consider possible lines of agreement. This meeting was followed shortly afterwards by another, when it was agreed that the first governing body should consist of representatives of the Hindu community, Mrs. Besant and representative trustees of the Central Hindu College and also that the Theological faculty should be entirely in the hands of Hindus. At the same time Mrs. Besant agreed to withdraw her petition for a charter which was then before the Secretary of State. At subsequent meetings presided over by the Maharaja Bahadur of Darbhanga a draft constitution was arranged and it was decided to wait upon the Hon. Member for Education and lay before him the provisional scheme. In the meantime, deputations for the collection of funds were instituted and these visited the leading centres in India. The result was most satisfactory. Amounts, big and small, were promised not only from India, but from Indians so far afield as Borneo, Mauritius and South Africa; and besides Hindus of all denominations and stations in life, some Mahomedans, and a few Europeans, official as well as unofficial, have promised to contribute.

Government Approval.—In October 1911, Sir Harcourt Butler wrote a very sympathetic letter signifying the approval of Government to the scheme and indicating the conditions laid down by the Government of India:—

1. The Hindus should approach Government in a body, like the Mahomedans.
2. A strong, efficient and financially sound college with an adequate European staff should be the basis of the scheme.
3. The University should differ from existing Indian Universities by being a teaching and residential institution and by offering religious instruction.
4. The movement should be entirely educational.
5. There should be the same measure of Government supervision as in the case of the proposed University at Aligarh.

It was subsequently added that a sum of Rs. 50,00,000 must be collected, but the capitalised value of the properties transferred in trust and the perpetual grants made by the Maharajas of Jodhpur, Kashmir and Bikanir may be included.

Objects of the University.—These may be said to be as follows:—

1. To promote the study of the Hindu Shastras and of Sanskrit literature generally, as a means of preserving and popularising the best thoughts and culture of the Hindus and all that was good and great in the ancient civilisation of India.
2. To promote learning and research generally in arts and science in all branches
3. To advance and diffuse such scientific, technical and professional knowledge, combined with the necessary practical training, as is best calculated to promote indigenous industries and develop the material resources of the country.
4. To promote the building up of character in youth by making religion and ethics an integral part of education.

Proposed Faculties.—In a letter to Sir Harcourt Butler the Maharaja Bahadur of Darbhanga has given an outline of the proposed faculties, which will be those of Oriental studies, Theology, Arts, Science (Pure and Applied) and Law. The main objects of the first-named will be to foster the study of Sanskrit and its literature. It is proposed to place in charge of the work a European Sanskrit scholar who will be assisted by Indian professors and pandits of the old class. The faculties of Arts and Science will work for the present on the lines laid down by the existing universities. The study of some special branch of technical education will be best inaugurated under the heading Applied Science which will be expanded into a Faculty of Technology in due course. The Faculty of Law will specialise in the Hindu Law and its study from original sources. It is hoped also that in course of time there will be Faculties or Colleges of Agriculture, Commerce, Medicine, Surgery and other branches of knowledge such as Music and the Fine Arts.

Proposed constitution.—In July, 1914, Sir Harcourt Butler addressed a letter to the Maharajah of Darbhanga, in which he stated that the Government of India and the Secretary of State had come to the conclusion that the best form of constitution would be to constitute the Lieutenant-Governor of the United Provinces ex-officio Chancellor of the University with certain opportunities for giving advice and certain powers of intervention and control. "The Hindu University," he wrote, "though not empowered to affiliate colleges from outside will be Imperial in the sense that subject to regulations, it will admit students from all parts of India, on the other hand it will be localised in or by Benares. There will be obvious advantages in having as Chancellor of the University the Lieutenant-Governor of the province who is also Chancellor of the Allahabad University and who will be able to help to correlate the work between the two, to secure them corresponding advantages and to foster a spirit of healthy co-operation. Moreover, such a constitution is in accord with the general policy of decentralization which is now pursued by the Government of India."

The powers which, in the opinion of Government, it is necessary to reserve to the Chancellor were enumerated. Some of these had been suggested by the University Committee, others were emergency powers which might never be exercised. The principle underlying them all is that, in the interest of the rising generation and the parents, the Government must be in co-operation with University and in a position to help it effectively and secure sound finance. The interest of the Government and the students and their parents in this matter are necessarily identical.

In concluding the letter referred to above, Sir Harcourt Butler said :—"In order to meet the sentiment of the subscribers it has been conceded that the University shall be called the **Benares Hindu University**, it will have no religious test and will be open to students of all denominations as well as Hindus. Hindu theological teaching and observances will not be compulsory for any but Hindus. It will also be a teaching and residential university. The terms mentioned above represent the conditions, the acceptance of which is a necessary precedent to the elaboration of any detailed scheme.

The Bill Passed.

On the basis of these principles further discussion took place between the Education Member of the Government of India and the promoters of the University, and by degrees complete agreement was reached. A Bill embodying this agreement was introduced into the Imperial Legislative Council in 1915 and passed at the closing session of the Council. For a summary of this debate the reader is referred to the section which records the work of The Imperial Legislative Council (q.v). The cardinal features of the Act are as follows :—

It establishes and incorporates a teaching and residential Hindu University at Benares. First of all, it creates a corporation sole of the University. The portals of the University are "open to persons of all classes, castes and creeds;" but provision shall be made "for religious instruction and examination in Hindu religion only;" this instruction is compulsory in the case of Hindus. Special arrangements are to be made for the religious instruction of Jain or Sikh students. The Governor-General of India for the time being shall be the Lord Rector, the Lieutenant-Governor for the time being of the United Provinces of Agra and Oudh shall be the Visitor, who has the power to inspect the University and its colleges; and to annul the proceedings of the University if they are found to be not in conformity with this Act, Statutes and Regulations. The authorities and Officers of the University are named to be (1) The Chancellor; (2) The Pro-Chancellor; (3) The Vice-Chancellor; (4) The Pro-Vice-Chancellor; (5) The Court; (6) The Council; (7) The Senate; (8) The Syndicate; (9) The Faculties and their Deans; (10) The Registrar; and (11) The Treasurer. In administrative affairs of the University, the Court is the supreme governing body and has the power to review the acts of the Senate. The executive body of the Court is called the Council. The Senate is the academic body of which the executive body is called the Syndicate. To meet the recurring charges, a permanent endowment of fifty lacs of rupees is to be made and invested in authorised securities. The degrees, diplomas, certificates and other academic distinctions granted by the University are to have the same recognition at the hands of Government as those granted by the existing Indian Universities. The formation and scope of Statutes and Regulations of the University are provided with minute detail. The Governor-General in Council has extensive power to act in cases of emergency, *viz.*, the removal of any member of the teaching staff, the appointment of a certain examiner, and the raising of the scale of remuneration of the staff. The University grows out of the present Hindu University Society, which is now dissolved and all its property, rights, powers and privileges are to vest in the Benares Hindu University.

It will be seen from the above that the Act stipulates that the University shall commence with an endowment of fifty lakhs of rupees. Sums aggregating approximately Rs. 82 lakhs have been promised, and Rs. 50 lakhs paid. The Government of India have undertaken to make an annual contribution of a lakh of rupees.

Foundation stone laid.—The foundation stone was laid in February, 1916, by H. E. the Viceroy. The Maharaja of Darbhanga, as President of the University Committee, read an address of welcome in which he recounted the history of the scheme and H. E. the Viceroy in his speech said :—"It is the declared policy of the Government of India to do all within their power and within their means to multiply the number of universities throughout India, realising, as we do, that the greatest boon Government can give to India is the diffusion of higher education through the creation of new universities. Many, many more are needed, but the new universities to be established at Dacca, Benares, and Bankipore, soon to be followed, I hope, by universities in Burma and the Central Provinces, may be regarded as steps taken in the right direction. Here at any rate in this city is a case where we can all stand together upon a common platform, for no one can dispute that the Benares Hindu University will add to the facilities for higher education and take to some extent the pressure off from the existing institutions, while it is the proud boast of at least one of those who have so successfully engineered this movement that the degrees of the Benares Hindu University shall be not only not lower but higher in standard than those of existing universities. It has even been claimed that this university will only justify its existence when the education given within its precincts shall make it unnecessary for Indian students to go to foreign countries for their studies and when such expeditions will be limited to advanced scholars and professors who will travel abroad to exchange ideas with the doctors and learned men of other continents in order to make the latest researches in all branches of knowledge available to their own alumni at Benares."

Denominational character.—Speaking of the denominational character of the University, His Excellency said :—"There are some who shudder at the very word denominational and

some who dislike new departures of any kind. Controversy has raged around such points in England and educational problems have a way of stirring up more feeling than almost any other social question. I do not think it is unnatural, for their importance cannot be exaggerated. If you realise that the object of an educational system must be to draw out from every man and woman the very best that is in them so that their talents may be developed to their fullest capacity not only for their individual fulfilment of themselves but also for the benefit of the society of which they find themselves members, if you realise this is it not natural that men should strive with might and main to attain and be content with only the very best and is it not natural that the strife should produce a mighty close of opinion and conviction? The questions at issue cannot be settled by theory and discussion. Education is not an exact science and never will be. We must also have experiment and I for one consider that Lord Ripon was a sagacious man when he deprecated that the educational system of this country should be cast in one common mould and advocated, as he was never tired of doing, that variety which alone he urged can secure the free development of every side and every aspect of rational character.

"I should like to remind you too that this new departure of a denominational university is not quite such a novel idea as some of you may think, for the Education Commission appointed by Lord Ripon, while recognising that the declared neutrality of the State forbids its connecting the institutions directly maintained by it with any one form of faith, suggested the establishment of institutions of widely different types in which might be inculcated such forms of faith as various sections of the community may accept as desirable for the formation of character and awakening of thought. They recognised the danger that a denominational college runs some risk of confining its benefits to a particular section of the community and thus of deepening the lines of difference already existing. I am not terrified by the bogey of religious intolerance. Rather do I think that a deep belief in and reverence for one's own religion ought to foster a spirit of respect for the religious convictions of others and signs are not wanting that the day is dawning when tolerance and mutual good-will shall take the place of fanaticism and hatred."

First Meeting of the Court.—In the absence of the Maharaja Scindia of Gwalior, the Maharaja of Benares presided at the first meeting of the Court of the University in August, 1916. The Vice-Chancellor (Dr. Sundar Lal) in his statement said that the total sum promised for the University, including the valuation of annuities granted by the rulers of Indian States amounted to Rs. 96,52,496. Of this sum, including the valuation of annuities, Rs. 59,74,337 had been released. Excluding schools, offices or other bodies, who had paid in their collective subscriptions under one single name, the amount had been collected from 23,429 subcribers, of whom 536 persons had each paid a sum of Rs. 500 or more. The Government of India had made a recurring grant of one lakh a year, the capital value of which at the rate o 3½ per cent. came to 35 lakhs.

Regulatins.—Speaking of regulations, which are not appended to the Act, the Vice-Chancellor said that the Committee of the Hindu University Society prepared a draft of regulations required and submitted it to the Government of India for consideration. The Hindu University Society also appointed a sub-committee to settle the regulations, which were not finally settled as they require further consideration at the hands of the Government of India and of the visitor of the University. Section 18 of the Act has provided that first regulations "shall be framed as directed by the Governor-General-in-Council," and that, to be valid, they must receive his previous approval. Accordingly, a committee, consisting of the Hon. Sir Sankaran Nair, Member for Education, and Mr. Sharp, the Education Commissioner, Sir Edward Maclagan, Secretary to Government of India in the Education Department, Mr. O'Donnell as a representative of the Visitor, and Dr. Sundar Lal considered various points brought forward and the matter is now receiving the consideration of the Government of India.

Finances.—In conclusion the Vice-Chancellor said:—"The funds that we have collected have enabled us to provide the permanent minimum endowment of fifty lakhs which we are required by the Act to provide for the recurring expenditure of the University. We have also money in hand to pay for land which is being acquired for us. But the many educational and residential buildings, which it is absolutely necessary for us to erect in the immediate future, will cost at the lowest computation a sum of thirty lakhs, and we have only a fraction of this amount in our hand. Besides this sum we stand in need of a great deal more money in order to develop what is called the modern side of University education, for, you know, our aim is to combine old and new ideas of the University, that is, to build up a University which will not merely promote literary and philosophical studies but will also provide instructions and training in the more fruitful applications of science to industries, both agricultural and manufacturing, and the liberal help, which the princes and people of India have extended to the University in the past, encourages the hope that we shall receive the necessary support in the future, a support which will put us in a position to build up, at no distant date, an institution which will be a source of strength and pride to the great and ancient community with the name of which it is associated."

The Chancellor of the University is H. H. the Maharaja of Mysore, and the Pro-Chancellor is H. H. the Maharaja of Gwalior.

The Mahomedan University.

The movement in favour of transforming the Mahomedan Anglo-Oriental College at Aligarh into a teaching and residential University was started as early as the end of last century. It was hoped that the foundation of such an institution would awaken among Mahomedans the memory of their old seats of learning and prove an incentive to them in the future to regain the intellectual eminence from which they seem to have fallen of late years. Some time ago it was observed in a government report that the backwardness in education on the part of Mahomedans was due partly to poverty, partly to indifference and partly to their educational wants not being the same as those of the remainder of the population amongst whom they live. In this year's report, however, it is stated that a remarkable awakening on the part of Mahomedans in this direction has been witnessed during the last decade, when the total number of pupils under instruction in all classes of institutions rose by nearly 60 per cent. On the other hand in the matter of higher education their numbers remain well below that proportion notwithstanding the large relative increase. It was the aim of Sir Syed Ahmed Khan, K.C.S.I., years ago to place the benefits of a liberal education within the reach of the Mahomedan community and in 1875 a school was opened which three years later was converted into the Aligarh College. Under the inspiring influence of Mr. Beck and of Mr. (now Sir) Theodore Morison great strides have been made. The college is now affiliated to the Allahabad University for the First Arts and B.A. for the B.Sc. in mathematics, chemistry and physics, for the M.Sc. in mathematics and chemistry and D.Sc. in mathematics; and for the M.A. in English, Arabic, Persian, Sanskrit, History, Philosophy, Political Economy and Mathematics. The students of the college are also instructed in the theology and faith of Islam.

State of the Project.—His Highness the Aga Khan, the foremost Indian Mahomedan, had for some time been waiting until the time was ripe to make an appeal for funds for the University, which he had constantly held before his co-religionists as the educational goal towards which they should strive. He conceived that the moment had arrived in 1911, when His Majesty the King Emperor visited India to announce in person his coronation to his Indian people. As the result of a spirited appeal, followed by a very active personal canvas, His Highness was able to secure promises aggregating some thirty lakhs of rupees. A draft constitution was drawn up and a consultative committee was formed. But the draft constitution was not approved by the Secretary of State, and on the question of the right of affiliating in particular there was a sharp difference of opinion. Government laid down, as in the case of the proposed Hindu University, that the new university should not have the power of affiliating Moslem institutions in other parts of India. Thereafter the project lapsed.

In 1915, when the Hindu University movement crystallised in the Hindu University Act further steps were taken to come to an agreement with the Government of India. The Government however laid down at once that the principles governing the constitution of the Hindu University would be applied to all other institutions of a like character, and that they were not prepared to consider any proposals, or to receive any deputation, which did not accept this governing rule. On October 15th, 1915, a meeting of the Moslem University Association was held at Aligarh, under the presidency of the Raja of Mahmudabad, when it was proposed that the meeting recommends to the Moslem University Foundation Committee the acceptance of the Moslem University on the lines of the Hindu University. The resolution was declared to have been carried, but this was subsequently disputed and an official report of the proceedings was issued. It is evident that whatever transpired at the Aligarh meeting a large number of Indian Moslems are not prepared to accept a constitution for their University similar to that of the Hindu University, and that there is no prospect of agreement. Nor is there the slightest prospect of the Government of India agreeing to any markedly different constitution. The prospects of the University materialising are therefore exceedingly remote; it is a curious sequel that the Hindu University, which was a poor second in the field, should have received its Act and be proceeding with the necessary buildings whilst the Moslem University, started long before, should be indefinitely held up. It has been proposed that the interest on the funds subscribed should be devoted to other educational objects, such as scholarships; but this is opposed by some of the subscribers, who maintain that they subscribed to a University, and if the funds are not to be devoted to this purpose they should be returned to the donors.

Alteration of Plans.—In April, 1917, at a meeting of the Foundation Committee the following resolution was passed:—

"That this meeting of the Moslem University Foundation Committee hereby resolves with reference to the letter of the Government of India, Education Department, dated Delhi 17th February 1917, D. O. No. 66, that the Committee is prepared to accept the best University on the lines of the Hindu University. It further authorises the Regulation Committee appointed at its Lucknow meeting, with the President and Honorary Secretary of the Moslem University Association as its ex-officio members to take necessary steps in consultation with the Hon. the Education Member for the introduction of the Moslem University Bill in the Imperial Legislative Council."

Patna University.

As soon as the new province of Bihar and Orissa was constituted in 1912 it was recognised that in order to make it a self-contained province it was necessary to furnish it with two institutions in particular, *viz.*, a High Court and a University. The High Court was first established. A Committee consisting of 17 members was appointed in May 1913, to draft a scheme for a University. It made its report in March 1914. The report was published and after considering the criticism on the proposals the Local Government submitted their revised scheme to the Government of India in May 1915. This scheme was revised by the Government of India, was sent in October 1915 to the Secretary of State for India who gave it his sanction. The Hon. Sir Sankaran Nair, the Educational Member of the Government of India, introduced this Bill in the Imperial Legislative Council on the 27th September 1916.

The provisions of the Bill were strongly criticised in the pubic press and in the Legislative Council. Those which evoked the widest opposition related to the restrictions placed on the creation of new colleges, the powers vested in the Chancellor and the Local Government, and the conferring of independent powers on the Syndicate, without reference to the Senate of the proposed University. The Bill was referred to a Select Committee on the understanding that it would be reconsidered in the light of these criticisms. The Select Committee submitted a unanimous report recommending drastic changes in the draft measure. The Bill, as revised by the Committee, was republished for the information of the public. The Educational Member of the Government of India moved at the meeting of the Imperial Legislative Council, held on the 12th September 1917, that the Select Committee's report be taken into consideration. There was a debate on that and the next day on the Bill, at the end of which Sir Sankaran Nair moved that the Bill to establish and incorporate a University at Patna, as amended, be passed. He observed that the Bill did not satisfy the extreme advocates of efficiency or those who thought that the representatives of popular opinion and sentiment have not obtained full control. That, he added, was perhaps in itself a recommendation. The motion was put and agreed to. The Act received the assent of the Governor-General on the 18th September 1917.

The body corporate of the Patna University consists of the Chancellor, the Vice-Chancellor, and the Senate. The Lieutenant-Governor of Bihar and Orissa for the time being is the Chancellor, and has, by virtue of his office, the right of presiding at Convocations of the University, of confirming proposals for the conferment of honorary degrees, of finally deciding any dispute with regard to the election of members of the Senate and the Syndicate and of inspecting the University and of visiting and inspecting the Colleges, both generally and for the purpose of seeing that the proceedings of the University are in conformity with the Act and the Regulations. He may, by order in writing, annul any such proceeding which is not in conformity with the Act and the Regulations, provided that, before making any such order, he shall call upon the University to show cause why such an order should not be made, and if any cause is shown within a reasonable time he shall consider the same.

The Vice-Chancellor is to be appointed by the Local Government for a term of three years. He will be eligible for re-appointment from time to time, provided no such re-appointment is far more than two years. Besides presiding at meetings of the Senate and the Syndicate, he is empowered to appoint officers and servants whose aggregate emoluments do not exceed two hundred rupees a month: and also to visit and inspect colleges.

The Senate is to consist of not less than sixty and not more than seventy-five ordinary Fellows. The following *ex-officio* fellows are not included in this number: the Vice-Chancellor, the members of the Executive Council of the Lieutenant-Governor, the Bishop of Chota Nagpur, the Director of Public Instruction, and the Principals of all Colleges in which instruction to a degree standard is given. The members of the first Senate are named in the first schedule to the Act, but in the next and succeeding Senates fifty ordinary Fellows will be elected by the teaching staffs of the affiliated colleges, by graduate teachers of registered schools, by registered graduates, and by specified associations or public bodies. The Senate is the supreme governing body of the University. The Syndicate is to consist of fourteen members. Special provision is made for the representation of Orissa both in the Senate and the Syndicate.

The Colleges affiliated to the University are of two kinds: Colleges of the University, whose buildings are situated within a specified area, and External Colleges, whose buildings are situated in one of the four following towns: Muzaffarpur, Bhagalpur, Cuttack, Hazaribagh. It is provided that this condition may be dispensed with in any particular case with the sanction of the Government of India.

The features of the Patna University which differentiate it from the five older non-denominational universities are: the powers of the Chancellor which are on the lines of those of the Chancellor of the Benares Hindu University, the composition of the Senate which is predominantly elective, and the combination of the characters of a residential and an affiliating University.

Mysore University.

The Mysore University was constituted under Regulation V of 1916, for the better encouragement and organisation of education in the State. His Highness the Maharaja is the Chancellor of the University. During the year 1916-17 it comprised two constituent colleges, viz., the Maharaja's College at Mysore, the Head-quarters of the University, and the Central College at Bangalore.

The Council is the executive body of the University and consisted of 10 members. The Senate consisted of 58 Fellows. The two faculties of Arts and Sciences were constituted and their Deans elected.

The year 1916-17 being a period of transition, provision was made for such of the classes of the Madras University as were found necessary, work under the Mysore University beginning with the second year class. As a transitory arrangement, passed intermediate candidates of the Madras University were admitted to the second year B. A. class. The total numbers on the rolls were 275 in the Maharaja's College and 313 in the Central College, the number of students in the second year B. A. class in them being 40 and 37 respectively.

Eleven endowments of the aggregate value of Rs. 79,638 were offered to the University and accepted. Of this amount Rs. 30,376 was contributed by Mr. Navinam Ramanujacharya, and Rs. 20,000 by Lady Kaveri Bai Krishnamurti.

The income of the University from all sources amounted to Rs. 8,66,648 and the expenditure to Rs. 3,84,450. Of the total receipts, a sum of Rs. 8,06,000 was received as grants from Government, Rs. 37,300 as grants from private persons, Rs. 1,845 as examination fees, Rs. 20,433 fees from Colleges, Rs. 394 fees for the registration of graduates and the rest was made up by other receipts.

Other important items of work done by the University during the year were the framing of courses of studies for the B. Sc., B. E., B. Com., and M.A., degree examination; working out details for the institutions of B. E., B. Com., B. T. and medical courses; framing rules of business of the Council and the Senate; framing ordinances for regulating the election of Fellows; gauging the requirements of the two colleges for the next 5 years; framing a scheme for the activities of the publication bureau and the Extension Lectures Board; publication of a booklet regarding the courses of studies and text-books and of the 1st number of the University Magazines; and preparation of a handbook to the University. Towards the end of the year Government sanctioned the institution of the faculties of Engineering and Commerce in the University so also the opening of the B.Sc. classes in the Central College from the new academical year. The construction of University buildings at Mysore made good progress during the year.

Burma University.

During his visit to Rangoon in December 1916, H. E. the Viceroy said that proposals for a Burma University had long been under consideration and he hoped that a final settlement would soon be reached enabling the Province to realise its cherished aspiration.

Correspondence relating to the scheme and a **draft Bill** for the University was published in April, 1916, together with an explanatory note by Mr. J. G. Covernton, Director of Public Instruction. Mr. Covernton says that the draft bill of 1913-14 has been entirely recast on the lines of the Hindu University Bill. While the complicated constitutional machinery of the Hindu University has not been adopted the principles of arrangement governing its Bill have been followed. Thus the Bill itself, contains definitions and a statement of the various authorities and Officers of the University and of their functions, general provisions, regarding incorporation, tenure of property, administration of funds, admission of institutions, award of degrees and diplomas and clauses conferring emergency powers on Government and enabling the authorities stated to frame, amend or repeal statues or regulations.

Modified plans.—A letter, dated the 2nd March from the Hon. Mr. C. M. Webb, I.C.S., Secretary to the Government of Burma to the President of the Educational Syndicate, Burma states: If it is considered essential that a university should be started on the scale originally contemplated it will be necessary to postpone its constitution until the requisite funds are available, but it is financially possible to commence a university at an early date on a modified scale, utilising the colleges which have already attained university standing and, with the addition of a central executive staff to proceed to create a small university on the lines suitable to the immediate requirements of the province. The Lieutenant Governor considers that a university on the modified scale suggested is not at all worthy of the province of Burma. It is, however, the only alternative to a postponement of the scheme for a period which cannot at present be estimated.

Practical Studies.—On this practical ground His Honour is prepared to accept it if the Educational Syndicate approve of it as a temporary measure. It should be recognised that there is an unique opportunity in Burma of starting a university on new lines free from many of the traditions which have hampered university development in other Indian provinces. His Honour is disposed to think, on general grounds and with some reference to the needs of the province, that the Rangoon University may usefully be of more practical type than any yet attempted in India with the control and direction of full University course in arts and science, pure and applied, technology, medicine, engineering, agriculture, law, forestry, veterinary science and training, commerce and arts and architecture. It may perhaps combine with University instruction practical studies at the Chief Court, the Pasteur Institute and the hospitals and also at the Museum which the local Government is committed to build as soon as funds are available. It is possible in Burma to a greater extent than in any of the older and more advanced provinces in India to concentrate the intellectual energies of the province in one immediate neighbourhood and to develop a really many sided university.

Dacca University.

With the modification of the Partition of Bengal announced by His Majesty the King Emperor at the Coronation Durbar at Delhi in December 1911, Dacca ceased to be the capital of the separate province of East Bengal. Nevertheless, it was decided that the interests of higher education in that part of the new Bengal Presidency demanded the creation of a separate University. His Majesty, in replying to the address of the Calcutta University on the 6th January 1912 had declared that it was his wish that there might spread over the land a network of schools and colleges, from which would go forth loyal and manly and useful citizens, able to hold their own in industries and agriculture and all the vocations in life. The proposal of a new University at Dacca was one of the first fruits of this Imperial declaration. The Government of India conveyed their decision to establish a University at Dacca in their letter to the Government of Bengal, dated the 4th April 1912, and the latter Government, by their Resolution, dated a month later, appointed a Committee to frame a scheme for the new University. The Committee was instructed therein that the proposed University should be of the teaching and residential and not of the federal type, and that it should be a self-contained organism unconnected with any colleges outside the limits of the city of Dacca.

The Committee consisted of Mr. R. Nathan, as Chairman, Mr. Kuchler, Director of Public Instruction, Bengal, Dr. Rash Behari Ghose, Nawab Sayid Nawab Ali Chaudhuri, Nawab Siraj-ul-Islam, Babu Ananda Chandra Roy, Mr. Mahomed Ali, Principal H. R. James, Principal W. A. J. Archbold, Mahamahopadhyaya Satis Chandra Acharji, Babu Lalit Mohun Chatterji, Professor C. W. Peake, Shams-ul-Ulama Abu Nasr Muhammad Waheed, and Mr. D. S. Fraser, as Secretary. The Committee made their report at the end of the year. They submitted a complete scheme with a financial estimate sufficiently detailed to enable the proposals to be laid before the Secretary of State. They proposed that the Dacca University should include the following departments:—Arts Science, Islamic Studies, Law, Engineering, Medicine and Teaching. The department of **Islamic Studies** was intended to be a distinctive feature of the new University, which, it was believed, would be greatly appreciated by the Mahomedan community of Bengal. The University, it was proposed, should consist of six Arts Colleges, namely, the existing Dacca and Jagannath Colleges and in addition, a New Arts College, A Mahomedan College, a Women's College, and a College for the well-to-do Classes; an Engineering College; a Teachers' College; a Law Department; a Department of Medical Studies; and Post-graduate courses in Arts and Science. All Mahomedan students in residence would, it was proposed, join the Mahomedan College, but it would be open to a Mahomedan student who lived with his parents or guardians to enter any college on the same terms as other non-resident students. The inclusion of a **Women's College** in the scheme was justified on the ground that female education in Bengal was developing in so promising a manner that women students might fairly claim to share in the benefits of the new residential University. Before leaving the subject of Arts Colleges, reference should be made to the special provision which was made in the scheme for **Physical Education and training**. Every student was to receive individual care and physical training appropriate to his needs and constitution, and at the same time, every encouragement was to be given to outdoor games and sports, and to the healthy rivalry of intercollegiate and University competitions. The social life of the proposed University was also provided for. The College for the well-to-do classes was intended to attract young men of the land-owning and wealthy classes whom the ordinary colleges, it was thought, would not, attract. A word of explanation is necessary as regards the medical and law departments proposed for the University. The idea underlying them was that the local conditions were not sufficiently developed for the immediate establishment of a Medical College and a Law College, and that, for some years to come the University should content itself with preparing students for the Medical and Law Degree examinations of the Calcutta University. The total cost of the full scheme was estimated at 53 lakhs of rupees, but deducting certain sums which were available from other sources the net cost was put down at nearly 40 lakhs, exclusive of recurring charges. These were expected to involve a net total of about 6¼ lakhs annually.

Before the scheme thus elaborated by Mr. Nathan's Committee could be taken in hand, the war broke out. The possibility of giving effect to the full scheme had to be abandoned but in reply to a question from the Hon. Mr. Ambika Charan Mozumdar, the Government of Bengal stated at a recent meeting of the Bengal Legislative Council that a **modified scheme** costing 38 lakhs, capital and recurring charges included, as against 59 lakhs of the original scheme, would be taken in hand. The modified scheme will merely be the preliminary to carrying out the larger scheme. The following institutions will form the nucleus of the University; The Dacca College, the Jagannath College, the Mahomedans College, the Women's College, the Teachers' College, the Law Department, Department of Medical studies and Department of Islamic studies. Other institutions such as a new college, an Engineering College and a Department of Sanskritic studies which are included in the complete scheme have had to be omitted owing to the financial position. The construction of the building for the Mahomedan College will be postponed until funds are available for the inauguration of the larger scheme and it will be accommodated for the present in the old Secretariat Building. Zoological, physiological and anatomical laboratories have also been omitted for the present but it is hoped to find temporary accommodation for them pending the construction of separate buildings.

Domestic Servants.

The relationship of master to servant in India is a subject to which attention is frequently directed in the Press by complaints about the alleged deterioration of domestic servants and the hardships to which employers are subjected by the boycotting action of discharged servants. The remedy most commonly propounded for misbehaviour on the part of servants is registration with a view to checking the use of false testimonials, or "chits," and to enabling masters to obtain certain information as to the character of the persons they employ. This mode of procedure is of German origin, for the old Prussian Servants' Ordinances (Gesindeordnung) were supplemented in 1854 by a law, applying only to agricultural labourers and domestic servants, which punishes breach of contract, and since then various State laws dealing with domestic servants have been passed in Germany. The conditions are not, however, analogous for the servant keeping class in India is proportionately larger than in Europe, as also is the number of servants kept by each individual.

The first attempt in the East to deal with the problem by legislation was made in **Ceylon.** The act dealing with the registration of domestic servants in that Colony is comprised in Ordinance No. 28 of 1871. It extends to all classes of domestic servants, hired by the month or receiving monthly wages, and the word 'servant' means and includes head and under-servants, female servants, cooks, coachman, horsekeepers and house and garden coolies. The Act came into operation in 1871 and empowered the Governor to appoint for the whole of the Island or for any town or district, to which the Ordinance is made applicable, a registrar of domestic servants, who is to be under the general supervision and control of the Inspector-General of Police. A registry is kept by the registrar of all domestic servants employed within his town or district, and he has to enter therein the names of all the servants, the capacities in which they are employed at the time of such registration, the dates of their several engagements and such memorandum of their previous services or antecedents as they may desire to have recorded in the register. But the registrar must, previous to his entering all these details, satisfy himself as to the credibility of the statements made to him. Any person, who may not have been a domestic servant before, but who is desirous of entering domestic service, has to submit an application to the registrar, and if the registrar is satisfied that there are reasonable grounds to believe that the applicant is a fit and proper person to enter domestic service he shall enter his name in the register, recording what he has been able to learn respecting the person's antecedents together with the names of any persons who are willing to certify as to his respectability. If the applicant is unable to produce satisfactory or sufficient evidence as to his fitness for domestic service the registrar may grant him "provisional" registration, to be thereafter converted into "confirmed" registration according to the result of his subsequent service. If the registrar is satisfied that the applicant is not a fit and proper person he should withhold registration altogether but in such a case he must report his refusal to register to the Inspector-General of Police.

Every person whose name has been registered in the general registry is given a pocket register containing the full particulars of the record made in the general registry. No person can engage a servant who fails to produce his pocket register or whose pocket register does not record the termination of his last previous service, if any. On engaging a servant the master has to enter forthwith in the pocket register the date and capacity in which such servant is engaged and cause the servant to attend personally at the registrar's office to have such entry inserted in the general registry. Similarly, in case the master discharges a servant he must insert in the pocket register the date and cause of his discharge and the character of the servant. Provided that if for any reason he be unwilling to give the servant a character or to state the cause of his discharge he may decline to do so. But in such a case he must furnish to the registrar in writing his reasons for so refusing. If the servant on dismissal fails to produce his pocket register the master must notify that fact to the registrar. Whenever any fresh entry is made in the pocket register the servant is bound to attend the registrar's office to have such an entry recorded in the general registry. Every servant whose name is registered shall, if he subsequently enters service in any place not under the operation of the Ordinance, attend personally at the nearest police station on his entering or leaving such service and produce his pocket register to the principal officer of police at such station in order to enable the police officer to record the commencement or termination of the service. The police officer has then to communicate it to the registrar of the town or district in which such servant was originally registered.

Various **penalties of fine** as well as of imprisonment are imposed for violation of any of the acts required to be done or duties imposed by the Act on the various persons mentioned below. As respects masters if they fail to fulfil any of the duties imposed on them by the Act they expose themselves to a liability of their being fined to the extent of Rs. 20. Similarly a servant, who fails to fulfil any of the duties imposed on him by the Act is liable to pay a fine not exceeding Rs. 20. But in case he gives any false information to the registrar or to any other person on matters in which he is required by this Ordinance to give information he is liable to a fine not exceeding Rs. 50 or to imprisonment, with or without hard labour, not exceeding 3 months. A fee of 25 cents. is charged to the master on engaging a new servant, a like fee of 25 cents. is charged to the servant on his provisional registration, or on registration being confirmed, or for registration of previous service or antecedents. But in case of loss or destruction of the pocket register the servant has to pay one rupee for the issue of a duplicate pocket register.

A similar Ordinance (No. 17 of 1914) has been introduced in the **Straits Settlements,** where its operation has been limited to such local areas as may be declared by the Governor in Council, and its application within such areas has been restricted to the class of householders who are expected to desire the benefi of its provisions.

Local Self-Government.

Throughout the greater part of India, the village constitutes the primary territorial unit of Government organisation, and from the villages are built up the larger administrative entities—tahsils, sub-divisions, and districts.

"The typical Indian village has its central residential site, with an open space for a pond and a cattle stand. Stretching around this nucleus lie the village lands, consisting of a cultivated area and (very often) grounds for grazing and wood-cutting.... The inhabitants of such a village pass their life in the midst of these simple surroundings, welded together in a little community with its own organisation and government, which differ in character in the various types of villages, its body of detailed customary rules and its little staff of functionaries, artisans and traders. It should be noted, however, that in certain portions of India, *e.g.*, in the greater part of Assam, in Eastern Bengal, and on the west coast of the Madras Presidency, the village as here described does not exist, the people living in small collections of houses or in separate homesteads".—(*Gazetteer of India.*)

The villages above described fall under two main classes, *viz.*—

Types of Villages.—"(1) The 'severalty' or raiyatwari village, which is the prevalent form outside Northern India. Here the revenue is assessed on individual cultivators. There is no joint responsibility among the villagers, though some of the non-cultivated lands may be set apart for a common purpose, such as grazing, and waste land may be brought under the plough only with the permission of the Revenue authorities, and on payment of assessment. The village government vests in a hereditary headman, known by an old vernacular name, such as *patel* or *reddi*, who is responsible for law and order, and for the collection of the Government revenue. He represents the primitive headship of the tribe or clan by which the village was originally settled.

"(2) The joint or landlord village, the type prevalent in the United Provinces, the Punjab and the Frontier Province. Here the revenue was formerly assessed on the village as a whole, its incidence being distributed by the body of superior proprietors, and a certain amount of collective responsibility still, as a rule, remains. The village site is owned by the proprietary body, who allow residences to the tenantry, artisans, traders and others. The waste land is allotted to the village, and, if wanted for cultivation, is partitioned among the shareholders. The village government was originally by the *punchayet* or group of heads of superior families. In later times one or more headmen have been added to the organisation to represent the village in its dealings with the local authorities; but the artificial character of this appointment, as compared with that which obtains in a raiyatwari village, is evidenced by the title of its holder, which is generally *lambardar*, a vernacular derivative from the English word 'number.' It is this type of village to which the well-known description in Sir H. Maine's *Village Communities* is alone applicable, and here the co-proprietors are in general a local oligarchy with the bulk of the village population as tenants of labourers under them."

Village Autonomy.—The Indian villages formerly possessed a large degree of local autonomy, since the native dynasties and their local representatives did not, as a rule, concern themselves with the individual cultivators, but regarded the village as a whole, or some large landholder as responsible for the payment of the Government revenues, and the maintenance of local order. This autonomy has now disappeared owing to the establishment of local, civil and criminal courts, the present revenue and police organisation, the increase of communications, the growth of individualism, and the operation of the individual *raiyatwari* system, which is extending even in the north of India. Nevertheless, the village remains the first unit of administration; the principal village functionaries—the headman, the accountant, and the village watchman—are largely utilised and paid by Government, and there is still a certain amount of common village feeling and interests.

Punchayets.—For some years there was an active propaganda in favour of reviving the village council-tribunal, on *Punchayet* and the Decentralisation Commission of 1908 made the following special recommendations:—

"While, therefore, we desire the development of a *punchayet* system, and consider that the objections urged thereto are far from insurmountable, we recognise that such a system can only be gradually and tentatively applied, and that it is impossible to suggest any uniform and definite method of procedure. We think that a commencement should be made by giving certain limited powers to *Punchayats* in those villages in which circumstances are most favourable by reason of homogeneity, natural intelligence, and freedom from internal feuds. These powers might be increased gradually as results warrant, and with success here, it will become easier to apply the system in other villages. Such a policy, which must be the work of many years, will require great care and discretion, much patience, and judicious discrimination between the circumstances of different villages; and there is a considerable consensus of opinion that this new departure should be made under the special guidance of sympathetic officers."

This is, however, still mainly a question of future possibilities, and for present purposes it is unnecessary to refer at greater length to the subject of village self-government. An Act was passed in 1912 to provide for the establishment of *punchayets* in the Punjab; but it was contemplated that the areas for which these bodies would be established would be larger than villages, and their functions are limited to the disposal of petty civil suits. In the Punjab, it may be mentioned, village self-government survives to a considerable extent, on a basis of custom, and the desirability of bringing it under statutory regulation has been questioned.

Municipalities.—The Presidency towns had some form of Municipal administration, first under Royal Charters and later under statute, from comparatively early times, but outside of them there was practically no attempt at municipal legislation before 1842. An Act passed in that year for Bengal, which was practically inoperative, was followed in 1850 by an Act applying to the whole of India. Under

this Act and subsequent Provincial Acts a large number of municipalities was formed in all provinces. The Acts provided for the appointment of commissioners to manage municipal affairs, and authorised the levy of various taxes, but in most Provinces the commissioners were all nominated, and from the point of view of self-government, these Acts did not proceed far. It was not until after 1870 that much progress was made. Lord Mayo's Government, in their Resolution of that year introducing the system of provincial finance, referred to the necessity of taking further steps to bring local interest and supervision to bear on the management of funds devoted to education, sanitation, medical charity, and local public works. New Municipal Acts were passed for the various Provinces between 1871 and 1874, which, among other things, extended the elective principle, but only in the Central Provinces was popular representation generally and successfully introduced. In 1881-2 Lord Ripon's Government issued orders which had the effect of greatly extending the principle of local self-government. Acts were passed in 1883-4 that greatly altered the constitution, powers, and functions of municipal bodies, a wide extension being given to the elective system, while independence and responsibility were conferred on the committees of many towns by permitting them to elect a private citizen as chairman. Arrangements were made also to increase municipal resources and financial responsibility, some items of provincial revenue suited to and capable of development under local management being transferred, with a proportionate amount of provincial expenditure, for local objects. The general principles thus laid down have continued to govern the administration of municipalities down to the present day. In several Provinces there are, besides municipalities, "notified areas," *i.e.*, small towns which are not fit for full municipal institutions, but to which parts of the Municipal Acts are applied, their affairs being administered by nominated committees. These are to be regarded as embryo municipalities.

Local Boards.—The establishment of boards for dealing with local affairs in rural areas is a relatively recent development. No such boards existed in 1858, though some semi-voluntary funds for local improvements had been raised in Madras and Bombay, while in Bengal and the United Provinces consultative committees assisted the district officers in the management of funds devoted to local schools, roads and dispensaries. The system of raising cesses on land for purposes of this description was introduced by legislation in Madras and Bombay between 1865 and 1869; in the case of Bombay, nominated committees were to administer the proceeds of the cess. The year 1871 saw a wide development of legislation for local administrative purposes, partly due to growing needs, and partly the result of the financial decentralisation scheme of Lord Mayo's Government, various Acts being passed in different Provinces providing for the levy of rates and the constitution of local bodies, in some cases with an elected element, to administer the funds. The whole system was reorganised in accordance with the policy of Lord Ripon's Government. Under the Orders of 1881-2 the existing local committees were to be replaced by a system of boards extending all over the country. The lowest administrative unit was to be small enough to secure local knowledge and interest on the part of each member of the board, and the various minor boards of the district were to be under the control of a general district board, and to send delegates to a district council for the settlement of measures common to all. The non-official element was to preponderate, and the elective principle was to be recognised, as in the case of municipalities, while the resources and financial responsibilities of the boards were to be increased by transferring items of provincial revenue and expenditure. It was, however, recognised that conditions were not sufficiently advanced or uniform to permit of one general system being imposed in all provinces, and a large discretion was left to Local Governments. The systems introduced in different parts of India by the Acts of 1883-5 (most of which are still in force) consequently varied greatly.

Mofussil Municipalities.—The total number of municipalities has altered little for many years past. New municipalities have been formed from time to time, but there have also been removals from the list. There was, indeed, a rather marked decrease according to the last decennial review (1902-12) and the number in 1911-12 was actually less than it was thirty years earlier. This result was brought about by the reduction to "notified areas" of a considerable number of the smaller municipalities in the Punjab and United Provinces. The figures showing the constitution of the municipalities call for little comment. Taking them as a whole, the proportion of elected members was in 1911-12 rather more than a half, whereas in 1901-02 it was slightly less. The proportions of non-officials and Indians, already high in 1901, also increased during the decade. Elected members are in the majority in the cities of Bombay, Madras and Rangoon and in Bengal (excluding Calcutta), Bihar and Orissa, the United Provinces, and the Central Provinces; in the North-West Frontier Province and Baluchistan, on the other hand, there are no elected members, and in Burma they form a small minority. Non-officials outnumber officials everywhere, and Indians outnumber Europeans to an even greater degree, except in Rangoon. Taking the municipalities individually, some of the commissioners are elected in the great majority of cases. Representation in the larger municipalities is in general by wards or classes of the community, or both. Voters must be residents not below a specified age, and property or status qualifications are generally laid down. The Chairman or President of the Municipal Corporation is sometimes nominated under the orders of the Local Government, but more often chosen by the commissioners from among themselves. The only provinces in which there has been in the past a large proportion of elected non-official chairmen are Madras, the Central Provinces, and the two Bengals; but Bombay has now to be added to the list, in view of the changes made in that province in the closing years of the decade. Various provisions exist as to the exercise of control by Government, particularly as regards finance and appointments. No loans can be raised without Government sanction, and generally speaking municipal budgets, and alterations in taxation, require the sanction of the Local

Government, or if a Commissioner. Proposals for giving municipal committees a larger degree of independence were put forward by the Decentralisation Commission, and some action on these lines has been taken. Government may provide for the performance of any duty which the commissioners neglect, and may suspend them in case of incompetence, default, or abuse of powers.

Municipal Revenues.—In the provinces in which octroi is levied generally, it is the most important source of income. The octroi duties have admitted disadvantages, but they are familiar through long usage to the inhabitants of the North and West of India. The possibility of abolishing them was under consideration during the last decade, and it was decided in the United Provinces to take this step in many municipalities, but the alternative of direct taxation is not a popular one. Precautions are taken to limit the tax to articles actually consumed in a town, and to prevent it from becoming a transit duty. The list of dutiable articles contains in each case only staple articles of local consumption and goods in transit are allowed to pass in bond or receive a refund of the duties on leaving the town. Articles of food are the most important class of goods subject to octroi taxation.

Incidence of Taxation.—A tax on houses and lands is levied to some extent in all provinces, and is the main source of municipal revenue where there is no octroi. Taxes on professions and trades, and on animals and vehicles, are generally levied, as also is a water-rate in the large towns that have been furnished with water works. Tolls on roads and ferries and lighting and conservancy rates contribute to the receipts in most provinces. The average incidence of municipal taxation per head of municipal population in 1911-12, for British India, as a whole, was Rs. 2·95. Leaving out of account the Presidency towns, where the figures are higher, the provincial averages ranged from Rs. 3·08 in the North-West Frontier Province and Rs. 2·38 in the Punjab, to Rs. 1·35 in Madras and Rs. 1·02 in Coorg. Other sources of revenue are municipal lands and buildings, conservancy receipts (other than the rates), educational and medical fees, receipts from markets and slaughter-houses (a very important item in Burma), and interest on investments.

Municipal Functions.—Municipal functions are classified under the heads of public safety, health, convenience and instruction. Within these heads the duties are many and varied. Expenditure, apart from that on general administration and collection, which amounts to something less than 10 per cent. of the total, is similarly classified. The principal normal functions of municipalities now are the construction, upkeep, and lighting of streets and roads, and the provision and maintenance of public and municipal buildings; the preservation of the public health, principally with reference to the provision of medical relief, vaccination, sanitation, drainage and water-supply, and measures against epidemics; and education, particularly primary education. Money is raised by loan for water-supply and drainage schemes, the cost of which is too large to be defrayed from ordinary revenues.

THE PRESIDENCY TOWNS.

The corporations of the Presidency towns occupy a special position, and are constituted under special Acts.

Calcutta.—The municipal administration of Calcutta is regulated by the Calcutta Municipal Act of 1899, which replaced an Act of 1888, the working of which had not been altogether satisfactory. The Corporation, as remodelled by the Act of 1899, consists of a Chairman, appointed by the local Government, and fifty commissioners, half of whom are elected at triennial ward elections, while the remainder are appointed, four each by the Bengal Chamber of Commerce and the Calcutta Trades Association, two by the Port Commissioners, and fifteen by the local Government. The Act also constitutes a smaller body, the General Committee, consisting of the Chairman with twelve of the commissioners, four elected by the ward commissioners, four elected by the other commissioners and four appointed by the local Government. There are various special committees and sub-committees. An amending Bill has published.

The entire executive power is vested in the Chairman, to be exercised subject to the approval or sanction of the Corporation or General Committee, whenever this is expressly directed in the Act. To the Corporation are reserved the right of fixing the rates of taxation and such general functions as can be efficiently performed by a large body, while the General Committee stands between the deliberative and executive authorities, and deals with those matters that are ill-adapted for discussion by the whole Corporation but too important to be left to the disposal of the Chairman alone. Power is reserved to the local Government to require the municipal authorities to take action in certain circumstances, and their sanction is required to large projects.

Bombay.—The municipal corporation of Bombay, which formed the model for the new Calcutta constitution, dates in its main features from 1872 and continues to be regulated by the Act of 1888 as amended. Some important changes were made by the City of Bombay Police Charges Act of 1907, which relieved the corporation of the police charges of the city, and made over to them in exchange further responsibility for primary education, medical relief and vaccination.

The Corporation consists of 72 councillors, of whom 36 are elected by wards, 16 by the justices of the peace, 2 by the Fellows of the University, and 2 by the Bombay Chamber of Commerce, the remaining 16 being appointed by Government. The general municipal government is vested in the Corporation, while the ordinary business is transacted by a Standing Committee of 12 councillors, 8 appointed by the Corporation and 4 by Government. The president of the corporation is elected by the councillors but is not, like the chairman of the Calcutta Corporation, an executive officer. The

chief executive authority is vested in a separate officer, appointed by Government, usually from the ranks of the Indian Civil Service, styled the Municipal Commissioner, who can, however, be removed by a vote of 45 councillors.

Madras.—A new Municipal Act for the City of Madras was passed in 1904. By this Act the number of the municipal commissioners, to whom as a body the name Corporation was now applied, was increased from 32 to 36, besides the President, and provision was made for the appointment of three commissioners each by the Madras Chamber of Commerce and the Madras Trades Association, and of two by such other associations, corporate bodies, or classes of persons, as the Local Government might direct, while the number to be elected as divisional elections was fixed at 20. Under the Act previously in force the total number of elected commissioners was not more than 24. The remaining commissioners were appointed, as they are under the new Act, by the Local Government, who also appoint the President. The Act of 1904 also introduced various other changes in the law which need not be specially noticed; it was modelled to a large extent on the Calcutta Act of 1899. Executive authority is vested in the President, who is removable under the existing law, by a vote of 28 commissioners. A Standing Committee, consisting of the president and eight other commissioners, is mainly concerned with financial and building question. The President, like the chief executive officers in Calcutta and Bombay, is usually a member of the Indian Civil Service. The number of persons enrolled as voters in 1911-12 was 9,824 rather more than 6 per cent. of the total adult male population. The control of the Local Government over the municipality has hitherto been more stringent than in the other Presidency towns.

DISTRICT AND LOCAL BOARDS.

The duties and functions assigned to the municipalities in urban areas are in rural areas entrusted to District and Local Boards. The systems of rural local government in the various provinces differ widely. The Madras organisation, which provides for three grades of local boards, most nearly resembles the pattern set in the original orders. Throughout the greater part of that province important villages and groups of villages are organised as "Unions", each controlled by a PANCHAYAT. These bodies receive the proceeds of a light tax on houses, and spend them mainly on sanitation. Next come the Taluk Boards, which form the agency for local works in the administrative sections into which the districts are divided. Finally, there is the District Board, with general control over the local administration of the district. In Bombay there are only two classes of boards, for districts and TALUKAS respectively. In Bengal, the Punjab, and the North-West Frontier Province the law requires a District Board to be established in each district, but leaves the establishment of subordinate local boards to the discretion of the Local Government. The Bengal Act authorises the establishment of village Unions also, but this provision has not been very largely used. The United Provinces Act formerly in force directed the establishment of district and sub-district boards, but the latter were abolished, as mentioned below, in 1906. The system in the Central Provinces bears some resemblance to that which prevails in Madras, the villages being aggregated into "circles", and the circles into "groups", each of which has a Local Board, while for each district there is a District Council having authority over the Local Boards. In Assam district boards have not been introduced, and independent boards are established in each sub-division. Neither district nor sub-district boards exist in Burma, or in Baluchistan. District boards were started in Lower Burma in accordance with Lord Ripon's Local Self-Government Resolution of 1882, but the members took no active interest in them, and they died out after a few years. The district funds are now administered by the Deputy Commissioners of districts.

Elective Principle.—The degree to which the elective principle has been introduced varies greatly in different parts of India; but there is a considerable proportion of elected members everywhere, except in the North-West Frontier Province, where the system of election was abolished in 1903. On the whole, however, the principle of representation is much less developed in rural than in municipal areas. In Madras the elective system, previously applied to the district boards *only*, was extended to the Taluk Boards in 1909. In the United Provinces and the Central Provinces there is a substantial majority of elected members.

Chairmen.—The various Acts usually leave it to the Local Government to decide whether the Chairman of the district board shall be elected or nominated. In most provinces the Collector has, as a general rule, been appointed, though in the Central Provinces the president is elected, and is usually a non-official. In the United Provinces election, subject to the veto of the Local Government, was prescribed by the Act of 1906, but in practice the Collector is chosen. As regards the subordinate boards, the law and practice vary. Generally speaking, the sub-district boards are on the footing of subordinate committees or agencies of the district boards, with very limited powers and resources; but in Madras they exercise independent authority, subject to the general control of the district boards, in regard to the less important roads, primary education, medical work, and sanitation.

Provision is made, on much the same lines as in the case of municipalities, for the exercise of control in certain directions by Government or its officers.

Sub-District Boards.—The Decentralisation Commission, having in view the admitted failure of sub-district boards as a whole, under existing arrangements, except in Madras and Assam, put forward proposals for making them the principal agencies of rural board administration by giving them independent resources, separate spheres of duty, and large responsibilities. Proposals for giving the district boards a larger measure of independence were also put forward.

Revenue and Expenditure.—The sources of income open to rural boards are much narrower and less elastic than those of the municipalities. The greater part of their revenue is derived from a cess which they are empowered to levy on the land, and which usually does not exceed one anna in the rupee on the annual rent value (or, in ryatwari provinces, the Government assessment). The cess is ordinarily collected by Government agency along with the land revenue, and varies in amount with the latter. Since 1905 the income derived from the land cess has been supplemented by a special Government contribution calculated at the rate of 25 per cent. of that income. Substantial amounts, apart from this special contribution, are granted to the district boards by the Local Governments for various purposes. Apart from receipts in connection with their educational and medical institutions, and markets, the only other important sources of independent revenue are pounds and ferries, and, in Madras, road tolls. Except in Madras, the sub-district boards have generally no independent sources of income, and merely receive such moneys as the District Boards may allot to them. In Madras the Taluk Boards receive half the land cess levied in their areas, as well as certain miscellaneous revenues.

District and Local Boards.—The following table shows the general constitution of the boards in each province, the figures in italics relating to local boards, the others to district boards.

Province.	Number of Boards.	Total Number of Members.	By Appointment.			By Employment		By Race.	
			Ex-officio.	Nominated.	Elected.	Officials.	Non-Officials.	Europeans.	Indians.
Madras	25	779	124	293	362	279	500	130	649
	96	*1,652*	*97*	*782*	*773*	*409*	*1,243*	*66*	*1,586*
Bombay	26	553	126	182	245	132	421	71	482
	215	*3,123*	*526*	*1,205*	*1,392*	*590*	*2,533*	*138*	*2,985*
Assam	*19*	*318*	*76*	*58*	*184*	*80*	*238*	*135*	*183*
Bengal	25	513	134	166	213	151	362	85	428
	72	*854*	*63*	*384*	*407*	*97*	*757*	*37*	*817*
Bihar and Orissa ..	18	390	109	130	151	124	266	128	262
	41	*499*	*61*	*314*	*124*	*79*	*420*	*70*	*429*
United Provinces ..	48	922	47	245	630	262	660	102	820
Punjab	28	1,114	258	507	349	271	843	73	1,041
	13	*283*	*14*	*79*	*190*	*14*	*269*	*2*	*281*
N.-W. Frontier Province.	5	219	51	168	..	51	168	26	193
Central Provinces and Berar.	21	521	..	140	381	67	454	13	508
	81	*1,343*	..	*347*	*996*	*151*	*1,192*	*9*	*1,334*

POLICY OF GOVERNMENT DEFINED.

The Government of India issued on April 28th, 1915, a long resolution dealing with the growth and future of local self-government in India. From what has gone before it will have been seen that the Decentralisation Commission made many and detailed recommendations on this question, and the intention of the resolution was to summarise policy on these points, as well as to complete the chain of pronouncements of policy which commenced with the education resolution and was followed by the sanitary resolution. Owing however to the wide diversity of conditions in India, and the extent to which local self-government must be a provincial question, it was not apparently possible to lay down broad and simple lines, especially as in the main the development of local self-government is a question of the provision of funds, and no one has suggested whence they shall come, except in the way of doles from the Imperial Exchequer, which is already overburdened. The Resolution was therefore received with mixed feelings. Those who expected a declaration of a bold forward policy were disappointed, whilst those who realised the difficulties inherent in the working of the principle until some means of providing the necessary funds are devised realised that it went as far as possible in existing conditions.

The resolution commenced with the expression of opinion that the results on the whole have **justified the policy** out of which local self-government arose. The degree of success varies from province to province and from one part of a province to another, but there is definite and satisfactory evidence that of a growth of a feeling of good citizenship, particularly in the large towns. "*On all sides* there are signs of vitality and growth." Of the obstacles in the way of realising the ideals of the past the resolution placed in the forefront the smallness and inelasticity of the local revenues, then the indifference still prevailing in many places towards all forms of public life.

On a review, the Government of India decided to accept the view of the local-government or administration as to the degree of progress possible at the present time. Local Governments and Administrations, the resolution added, were prepared to advance in the direction of the main recommendations of the Decentralisation Commission.

Turning to details the resolution showed that of the 695 **Chairmen of Municipalities** 222 consisted of elected non-officials, 248 of elected officials, 51 of nominted non-officials, 174 of nominated officials. The election of non-official chairmen has long been urged by Indian politicians, and their views have been so far accepted that the majority of Local Governments are in favour of substituting, so far as possible, non-official for official chairmen. With regard to the larger municipalities, the Bombay system is now very much in favour. This consists in the main of a constitution under which an elected chairman is the mouth-piece of the corporation, whilst the head of the executive is an official nominated by Government but under the control of the Corporation. Whilst not pressing this system on all Local Governments, the resolution pointed out that it had the advantage of securing a continuous and strong executive administration by a paid staff, whilst maintaining the corporate control and activity of the municipal board. As to the **financial resources** of the municipalities, it was shown that the aggregate income of the 701 municipalities in existence at the close of 1912-13 (excluding the Presidency towns and Rangoon) amounted to £3,282,845, or Rs. 4,92,42,675 apart from extraordinary receipts, or an average of £4,683 or Rs. 70,245 a year. This shows a very rapid expansion. Contributions from Government have materially assisted this expansion. Since 1911, the Government of India have made grants amounting to £3,076,466 (Rs. 4,61,47,000), of which £368,200 (Rs. 55,23,000) are recurring, for urban sanitation. Municipalities have also received their share—the exact figure is not easily ascertainable—of the large educational grants made by the Government of India since 1911, amounting to about £3,987,800 (Rs. 5,98,17,000), of which £826,666 (Rs. 1,24,00,000) are recurring. Municipal boards have been relieved of all charges for the **maintenance of police** within municipal limits. In almost every province the recommendation that municipalities should be relieved from financial responsibility for famine relief and should receive assistance from Government in the case of severe epidemics, has been already given effect to, or the principle has been accepted. The Government of India have also accepted a further recommendation, namely, that assistance may legitimately be given by Government to poorer municipalities which, without it, would be unable to carry on the normal standard of administration required from them.

On the very important subject of financial control, which is sometimes described as minute the Government of India suggested that the municipalities should have a freer hand with regard to their budgets, the only check being the maintenance of a prescribed minimum balance. They held this out as the policy which should steadily be kept in view.

The Decentralisation Commission recommended that **sub-district boards** should be universally established and that they should be the principal agencies of rural administration. The Government of India left this question to the discretion of the Local Governments. The Local Governments favoured a policy where district and sub-district boards should contain a large preponderance of elected members. They took the view, in which the Government of India concurred, that an official should remain chairman of every district and sub-district board. The total number of district and sub-district boards in 1913 was 199 and 536 respectively, with an aggregate income of £3,787,219 (Rs. 5,68,08,292). In the same year they received specially large grants from the sums allotted by the Imperial Government for education and sanitation. The resolution analysed at some length the proposal that district boards should be empowered to levy a railway or tramway cess, in order to expedite the improvement of communications. The Government of India have empowered district boards to levy a special extra land cess of three pies in the rupee on the annual rent value of land for the construction of light railways or tramways, conditional on the proposal obtaining the assent of three-fourths of the members of the board. The Government of India also decided that the board could issue debentures secured on the railway property when its accumulated funds were insufficient to bear the cost of construction. They also recommended that the present restrictions on the financial powers of the boards should be gradually relaxed, in the direction of securing full discretion subject to the maintenance of the prescribed working balance.

Turning to the organisation of the **villages** the resolution expressed the views of the Government of India towards the establishment of panchayets in the following passage:—"where any practicable scheme can be worked out in co-operation with the people concerned, full experiment should be made on lines approved by the local government or administration concerned." With this general recommendation they left the matter to the local authorities. With regard to the **Presidency Corporatoins**, the Decentralisation Commission recommended that the Bombay system of an unofficial chairman and an official head of the executive should be generally followed. Bengal and Madras agreed generally with the proposal, but Rangoon regarded it as unsuitable to the conditions there obtaining. The Government of India declined to endorse the suggestion that a **Local Government Board** should be formed in each Province for the control of the local bodies. In conclusion, the resolution summarised the policy of the Government of India towards the development of local self-government as one of prudent boldness, calculating risks but not afraid to take them in the cause of progress.

Since this resolution was issued the Bombay Government has appointed a strong mixed committee to consider the whole question of local self-government in the rural areas, whose report is awaited with great interest.

Local Government Statistics.

Municipalities.—With this general introduction we can now turn to the statistical results of the working of Local Self-Government. The following table gives information as to the constitution of municipal committees, taxation, &c., in the chief provinces in 1915-16 :—

	Population within Municipal Limits.	Number of Municipalities.	Total Number of Members	By Qualification.			By Employment.		By Race.		Incidence of Municipal Taxation per head.
				Ex-Officio.	Nominated.	Elected.	Officials.	Non-Officials.	Europeans.	Indians.	
Presidency Towns.											s. d.
Calcutta	861,501	1	50	—	25	25	5	45	17	33	13 4
Bombay	979,445	1	72	—	16	56	7	65	17	55	16 10
Madras	518,660	1	36	1	15	20	4	32	13	23	5 2
Rangoon	284,935	1	25	1	5	19	3	22	14	11	15 8
District Municipalities.											
Bengal	1,971,191	112	1,539	116	533	890	194	1,345	141	1,398	3 0
Bihar and Orissa	1,180,919	55	775	118	191	466	127	648	83	692	1 8
Assam	127,921	19	211	39	96	76	49	162	33	178	2 9
Bombay and Sind	2,367,323	156	2,184	384	801	999	452	1,732	108	2,076	3 5
Madras	2,181,958	67	1,019	86	431	502	186	833	114	905	2 3
United Provinces	2,982,309	84	1,116	81	193	842	142	974	100	1,016	2 5
Punjab	1,609,994	100	1,156	222	397	537	241	915	91	1,065	3 7
N. W. Frontier Province	141,928	6	119	36	83	..	36	83	20	99	4 10
Central Provinces and Berar	890,684	56	774	15	268	491	162	612	57	717	2 10
Burma	690,029	44	560	178	281	101	200	360	142	418	3 5

Sanitation.

The history of the sanitary departments in India goes back for about fifty years. During that period great improvements have been effected in the sanitary condition of the towns, though much remains to be done; but the progress of rural sanitation which involves the health of the great bulk of the population has been slow, and incommensurate with the thought and labour bestowed on the subject. "The reason lies in the apathy of the people and the tenacity with which they cling to domestic customs injurious to health. While the inhabitants of the plains of India are on the whole distinguished for personal cleanliness, the sense of public cleanliness has ever been wanting. Great improvements have been effected in many places; but the village house is still often ill-ventilated and over-populated; the village site dirty, crowded with cattle, choked with rank vegetation, and poisoned by stagnant pools; and the village tanks polluted, and used indiscriminately for bathing, cooking and drinking. That the way to improvement lies through the education of the people has always been recognised."

Of recent years the pace has been speeded up as education progressed, education developed, and funds were available. In a resolution issued in May 23rd, 1914, the Government of India summarised the position at that time, and laid down the general lines of advance. This resolution (*Gazette of India*, May 25th, 1914) should be studied by all who desire to understand the present position and policy: its main features are summarised here.

The governments in India have moved more rapidly of late. In 1898, the Government of India issued an important statement of policy. In 1908, imperial grants amounting to Rs. 30,00,000 (£200,000) a year were made to local Governments. A new department of the Government of India was created in 1910 in order to relieve the Home Department of education, sanitation and some other branches of the administration. In addition to sanitary conferences held by local Governments, three All-India sanitary conferences were convened at Bombay, Madras and Lucknow, respectively, over which the Hon'ble Sir Harcourt Butler presided as Member of the Governor-General's Council in charge of the department concerned. These conferences were attended by non-officials as well as officials, by laymen as well as professional sanitarians. Again, the **Indian Research Fund Association** has been founded to further the prosecution of research, and the propagation of knowledge and experimental measures generally in connection with the causation, mode of spread and prevention of communicable diseases. To this fund the Government of India make an annually recurring grant of 5 lakhs of rupees (£33,333). Moreover, since the constitution of the new department of the Government of India, imperial grants have been made to local Governments and Administrations to the amount of Rs. 4,61,47,000 (£3,076,466), of which Rs. 55,23,000 (£368,200) are recurring, and Rs. 4,06,24,000 (£2,708,266) non-recurring. In addition, grants amounting to Rs. 82·33 lakhs (£548,866) a year have been made to district boards in certain provinces, a substantial portion of which will, it is hoped, be expended on rural sanitation. These grants have rendered practicable the execution of schemes which a few years ago seemed beyond the limits of financial possibility; and there can be little doubt that the movement for sanitary reform is now well established and progressive throughout the country.

Organisation.—As a result of the Plague Commission's Report Lord Curzon's Government took up with vigour the reorganisation of the sanitary department. Research institutes were started and an appointment of Sanitary Commissioner with the Government of India was created. The functions of this officer were to advise the Government of India upon sanitary and bacteriological questions to settle with local Governments the principles on which an advance should be made and to organise and direct research throughout India. The arrangement was not completely successful. Among the disadvantages, the separation of research from clinical work deterred men from entering the department, and the office work in connection with research prevented the Sanitary Commissioner from undertaking wide and constant touring. The organisation was accordingly modified in 1912. The Sanitary Commissioner is now the independent adviser to the Government of India in all technical and sanitary matters, but all questions of personnel as well as the administration of the bacteriological department and research generally have been placed under the control of the Director-General, Indian Medical Service, with the Sanitary Commissioner as his staff officer.

The Sanitary Organisation.

The sanctioned strength of the superior sanitary organisation in India now is

(*a*) A Sanitary Commissioner with the Government of India.

(*b*) A bacteriological department comprising—

(*i*) thirteen laboratory appointments distributed as follows:—

Central Research Institute	1 Director and 3 Assistants.
Bombay Bacteriological Laboratory	1 Director and 2 Assistants
King Institute of Preventive Medicine, Madras .	1 Director and 1 Assistant.
Pasteur Institute, Kasauli	1 Director and 1 Assistant.
Pasteur Institute, Coonoor	1 Director and 1 Assistant.

(*ii*) fifteen new appointments recently sanctioned for the prosecution of research work and direct investigation in the field.

(c) The following establishments under local Governments :—

Province.	Sanitary Commissioners.	Deputy Sanitary Commissioners.	Health Officers, Sanitary Engineers.			
			1st class.	2nd class.	Sanitary Engineers.	Deputy or Assistant Sanitary Engineers.
Madras	1	3	12	19	1	6
Bombay	1	5	4	9	1	..
Bengal	1	5	6	17	1	2
United Provinces	1	4	11	17	1	3
Punjab	1	2	2	5	1	1
Burma	1	2	4	16	1	2
Bihar & Orissa	1	3	2	8	1	2
Central Provinces	1	..	..	2	1	..
Assam	1	1	..	..	1	..
North-West Frontier Province	1	1	1	1	..	..
Delhi	1	..	3	..	1	..
Total	11	26	45	94	10	16

Provincial Agency.—In their resolution, dated the 23rd May 1912, the Government of India provided for a large increase in the number of Deputy Sanitary Commissioners and for the appointment of health officers (of the first-class for larger municipalities and of the second-class for the smaller towns) on the lines of detailed proposals received from local Governments. Twelve additional appointments of Deputy Sanitary Commissioner, thirty-five appointments of health officer of the first-class and a large addition to the number of second-class health officers were sanctioned in 1912 and 1913, the entire cost of the additional Deputy Sanitary Commissioners on the basis of the scale of pay fixed for Indians and half the cost of the health officers being met by imperial grants. The Government of India also advised local Governments to take powers, where these did not exist, to require a municipality to appoint a health officer and to veto the appointment of an unfit person. Such powers already exist in the Bombay Presidency, and have recently been taken by legislation in Bengal. Simultaneously, the Government of India recommended the system in force in Madras whereby every municipality is required to employ one or more trained sanitary inspectors in proportion to population. Sanitary inspectors are now being employed in large numbers in towns. In addition, the civil surgeon in every district is the sanitary adviser of the local authorities and in most provinces controls the vaccination staff. The provision of an increased staff of sanitary engineers is engaging urgent attention.

Voluntary Agency.—The Government of India attach great importance to the organisation of voluntary agencies and have recently made a grant of Rs. 20,000 (£1,333) a sum equivalent to that given by the Bombay Government to the BOMBAY SANITARY ASSOCIATION, which was founded in 1903, and now has corresponding branches in several districts and Native States.

Research.—The policy of the Government of India is to keep the control of research under itself, but to decentralise other branches of sanitation. The creation of an imperial department is no departure from that policy, and the large imperial grants already mentioned have been made without any interference with provincial Governments. While the general direction of a policy of public health must remain with the central Government, all detailed control and executive action are, and will be, left to local Governments. The Sanitary Commissioner with the Government of India is a touring officer empowered to consult and confer informally with local Governments and their officers upon matters connected with sanitation. He is not permitted to encroach upon the authority of Local Governments over the officers under their control.

Provincial Officers.—The position of Provincial Sanitary Commissioners towards the administrative heads of the medical department varies somewhat in different provinces. The Government of India do not wish to interfere with the arrangements which local Governments may consider best suited to local conditions but they desire to insist on the importance of defining the functions of the two officers and securing to the Sanitary Commissioner the position of responsible technical adviser to the local Government in all matters affecting public health.

Sanitary Boards.—In every province, sanitary boards have been composed with varying powers, some being merely advisory, others having authority to sanction schemes and allot funds. These boards are composed of officers belonging to the medical, sanitary, engineering and other branches of the civil services with the

addition of non-officials. The Government of India view with favour and confidence the devolution of financial authority and responsibility to these boards, and they commend to local Governments the appointment of a permanent salaried secretary to the board where this has not been done. They believe that such an appointment, wherever made, has resulted in an increase of efficiency.

Training.—Arrangements for training the superior sanitary staff are now engaging the attention of the Government of India. The chief difficulty at present is to provide courses in practical hygiene and in the study of the bacteriology and etiology of tropical diseases. It is hoped in the near future to make arrangements in India for the former and to utilise the schools of tropical medicine at Calcutta and elsewhere for the latter. Meanwhile, a British diploma in public health is required from candidates for the post of Deputy Sanitary Commissioners and health officers of the first class. The problems of public health in India are vitally complicated by the fact that biting insects are a prominent factor in the dissemination of disease and it is obviously desirable to provide in India, as soon as possible, a complete course of training for sanitary officers.

Training classes for sanitary inspectors are now held in all the more important provinces.

Department of Public Health.—A substantial beginning has thus been made for the development of a department of public health and Indians have been freely enlisted for it. The posts of Deputy Sanitary Commissioner and health officer are now open to Indians. Nine Deputy Sanitary Commissioners out of 26 and the majority of health officers are Indians. The new bacteriological department consisting of 28 officers is also open to duly qualified Indians.

As health officers and Sanitary Engineers gradually relieve Deputy Sanitary Commissioners of much of the drudgery of inspection and routine work, it is hoped that the latter will be set free to deal with epidemics and communicable diseases from a higher plane, and to consider issues of public health wider than those which they are able to review to-day. It is therefore important to provide in advance free interchange between them, the laboratory workers and those carrying out practical research in the field.

Progress of Research.—Research is slowly lifting the veil which hides the secrets of disease and mortality and opening up fields of inquiry scarcely thought of a generation ago. The discovery by Sir Ronald Ross of the part played by the mosquito in the communication of malaria and the appointment of the Plague Commission in 1898 are landmarks in the history of Indian Sanitation. In 1902, a research institute was founded at Guindy in Madras, named the King Institute after Lieutenant-Colonel King, C.I.E., I.M.S., in view of his devoted efforts in the cause of sanitation in that presidency. In 1905 Lord Curzon's Government summed up the position and the policy of the Government of India in regard to the establishment of laboratories for the study of problems of public health in India. The functions of the central laboratory were original research, the preparation of curative sera and the training of scientific workers. The functions of the provincial laboratories were diagnosis and special research connected with local conditions. This policy has been steadily developed. The Central Research Institute has been established at Kasauli. The Plague Research Laboratory at Parel has been extended and re-equipped and is now the bacteriological laboratory for the Bombay Presidency; and a proposal is under consideration to attach to it a school of tropical medicine. A research laboratory and school of tropical medicine are under construction at Calcutta. Pasteur institutes exist at Kasauli and Coonoor. A third is about to be established in Burma, and it is under discussion to establish others in Assam (where it will be combined with a research laboratory) and Bombay.

Besides the routine work connected with the bacteriological diagnosis of disease, antirabic treatment, the manufacture of various vaccines and sera and general research, these laboratories at different times have been the centres of many special investigations, notable amongst which are those on plague and enteric fever. It is hoped that before long each province in India will have a laboratory fully equipped for research.

Research Fund Association.—The foundation of the Indian Research Fund Association in 1911 has marked an important era in sanitary progress. The control and management of the association are vested in a governing body, the president of which is the Member in charge of the Education Department of the Government of India. The governing body is assisted by a scientific advisory board, of which not less than three members have seats on the governing body. They examine all proposals for work in connection with the scientific objects of the association and report as to their importance and feasibility. The members of this board are appointed for one year, but are eligible for re-election, and they have power to add to their number. The present members are the Director-General, Indian Medical Service, the Sanitary Commissioner with the Government of India, the Director of the Central Research Institute at Kasauli, the Officer in charge of the Central Malarial Bureau and the Assistant Director-General, Indian Medical Service (Sanitary). Sir Ronald Ross has been elected an honorary consulting member. The membership of the Indian Research Fund Association is open to non-officials. Every donor of Rs. 5,000 is entitled to become a permanent member, while every subscriber of Rs. 100 per annum can be a temporary member. Members of the association are entitled to attend and take part in the annual general meeting of the association and to receive copies of the reports and other publications issued from time to time by the association. Although, so far, the fund has been financed solely by the Government of India, it is hoped that in time Indian philanthropists will contribute towards the expansion of the association by founding chairs of research by financing experimental research measures and otherwise.

The association has also started a journal for the publication of medical research work done in India—the "INDIAN JOURNAL OF MEDICAL RESEARCH"—published quarterly. The fav-

ourable reception which has been accorded to the first three numbers is evidence of the increased interest that is being taken in sanitary science in India to-day.

Water Supply.—Few subjects have received more attention of late than the provision of a piped supply of filtered water in towns. Complete figures are not available but sums amounting to at least Rs. 3,51,58,297 (£2,343,886) have been spent during the last 20 years on completed schemes. Projects costing Rs. 1,10,03,433 (£933,562) are under construction and projects costing Rs. 1,14,44,750 (£762,983) have been prepared and sanctioned. These figures are exclusive of the expenditure in the Presidency towns and Rangoon.

Drainage.—Drainage schemes on modern lines, are the basis of all sanitary improvement in urban areas. The demand for them is scarcely less than that for piped water and is steadily on the increase. As in the case of water supply complete figures are not available but the known expenditure during the last twenty years has been considerable and is now rapidly increasing. The expenditure on completed works outside the Presidency towns and Rangoon during that period amounted to Rs. 97,65,049 (£651,003), whereas the cost of the works under construction is estimated at Rs. 1,54,20,502 (£1,028,033). In the beginning precedence over drainage was given to piped water-supply but experience has demonstrated the advantage of introducing both concurrently. Without drainage there is no means of carrying off the surplus water and without piped water-supply it is difficult to flush the drains properly.

When drainage schemes on modern lines were first started in this country, there seems to have been a bias against the use of sewers, and, wherever possible, open drains were adopted. Experience has shown that the preference for the open drain and the fear that sewers would give excessive trouble were not well founded. On the contrary, much of the advantage of a drainage system is lost if only open drains are used, as the old system of hand-carriage latrines has to be continued. Moreover, economy in establishment is possible only in the case of a sewage system.

Pilgrimages.—Pilgrimages necessitating as they do the collection of large numbers of persons, often more than a million, at one place at one time have an important sanitary aspect mainly in connection with cholera and other communicable diseases. The Government of India recently decided to examine the sanitary arrangements at the chief places of pilgrimage throughout India and local Governments were asked to appoint provincial committees for this purpose under the presidency of the Sanitary Commissioner with the Government of India with a view to formulate practical schemes of improvement. The inquiry is still in progress but the Government of India have already made a grant of Rs. 2 lakhs (£13,333) and promised an additional grant of 4 lakhs of rupees (£26,666) spread over four years towards the improvement of the pilgrim route to Badrinath; and they have made a further recurring grant of Rs. 20,000 (£1,333) a year for the same object. The important question of improving the conditions of the pilgrimage to the Hedjaz by Indian Musulmans is undergoing close scrutiny. The Governor-General in Council anticipates that these inquiries will lead to signal sanitary improvements and promote the convenience and comfort of many millions of His Majesty's loyal Indian subjects.

Rural Sanitation.—The following observations are based on practical experience of rural sanitation:—

(*a*) Travelling dispensaries may be used to spread a knowledge of the simple facts regarding the more common diseases. For this purpose the sub-assistant surgeons in charge should be given a special training in hygiene. Once they become known to the people as healers of the sick their advice as sanitarians may become more acceptable.

(*b*) The improvement of the village water-supply is as important as it is difficult. Apparently, excellent results have been obtained by disinfection of wells with permanganate of potash. Experiments are being made in different parts of India in the use of tube-wells, etc. It might serve as an useful object lesson to use pumps and tube-wells for the provision of water at fairs, schools, hospitals, and local public offices. In some localities, a tank supply alone is possible and the difficulty is to protect even new tanks from pollution.

(*c*) In several provinces, notably in Madras, village unions or circles have been formed and their committees entrusted with small grants for the improvement of the sanitation of the village site. This measure might be extended experimentally elsewhere. It is calculated to encourage discussion and inquiry regarding sanitary work.

(*d*) Village midwives are, in some districts, encouraged by small grants of money and rewards to attend at the head-quarters hospital for a short and simple course of training. These measures open up possibilities with reference to a reduction in infantile mortality and children's diseases generally.

(*e*) In most districts in India, the civil surgeon is also in theory the sanitary officer of the district. His duties at head-quarters, however, do not allow him to tour and inspect in the district to the extent that is necessary; even in the case of epidemics in the district it is sometimes not possible for him to leave headquarters. In some provinces, district sanitary officers have been appointed and there can be little doubt that many more such appointments are required and that one of the most urgent and hopeful measures for promoting rural sanitation is the appointment of well qualified and whole-time district health officers to control and organise all sanitary arrangements and experiments in the district.

Birth and Death Rates.—The population of the areas in which births and deaths were registered in 1915 was 238,527,877. 9,021,825 births and 7,142,412 deaths were registered; the rates per mille being 37·82 and 29·94 as compared with an average of 36·39 and 28·61 respectively for the previous five years

The birth-rate was lower in every province except Assam. The largest excess of births over deaths was shown in the United and Central Provinces, nearly 13½ and 12 per mille respectively though the birth-rate of the Central Provinces was the lowest since 1904. In Bengal 1·03 less births than death were registered, and in Coorg, 5·75 births less. The death-rate, though lower in 8 provinces, was kept practically stationary by the considerable rise in the remaining 5, the largest increase, 6·20 per mille, being in Assam.

Province.	Birth Rates (per mille).		Death Rates (per mille).	
	1914.	1915.	1914.	1915.
Delhi	48·86	47·91	37·98	28·97
Bengal	33·86	31·80	31·57	32·83
Bihar and Orissa	42·30	40·4	28·30	32·2
Assam	32·94	33·60	24·66	30·86
United Provinces	44·93	43·48	33·46	30·04
Punjab	46·30	43·6	31·96	36·33
N. W. Frontier Province	32·70	31·7	25·75	23·61
Central Provinces and Berar	51·37	47·95	36·69	35·91
Madras	33·50	31·2	25·00	22·0
Coorg	26·23	25·33	34·05	31·08
Bombay	37·43	37·10	29·48	26·12
Burma, Lower	34·69	33·39	22·29	25·12
Burma, Upper	36·69	38·01	26·22	32·72
Ajmer-Merwara	46·90	43·78	30·33	26·03
Total ..	39·61	37·82	30·00	29·94

Chief Diseases.—There are three main classes of fatal disease: specific fevers, diseases affecting the abdominal organs, and lung diseases. Intestinal and skin parasites, ulcers and other indications of scurvy widely prevail. The table below shows the number of deaths from all causes and from each of the principal diseases in British India and death-rates per 1,000:—

Years.	Deaths from all Causes.	Cholera.	Small-Pox.	Fevers.	Dysentery and Diarrhœa.	Plague.	Respiratory Diseases.
1912 ..	7,090,991	407,769 1·71	89,357 ·37	3,936,085 16·49	292,216 1·22	263,037 1·10	247,736 1·04
1913 ..	6,845,018	294,815 1·24	98,155 ·41	3,983,112 16·71	246,578 1·03	198,456 0·83	237,229 1·00
1914 ..	7,155,771	280,730 1·18	76,590 ·32	4,092,345 17·16	278,225 1·17	266,588 1·12	261,149 1·09
1915 ..	7,142,412	404,472 1·70	83,282 ·35	3,990,287 16·73	261,800 1·10	380,501 1·60	257,721 1·08

Cholera is much less prevalent than formerly and the increased mortality from this disease occurred in provinces where water-supply had been contaminated by floods the highest rate of death per mille 4·46 being reached in Assam; in Bengal where the greatest number of deaths 130,679; occurred infection is reported also to have been spread by throwing dead bodies of cholera patients into the rivers; in the Punjab where the number of deaths, 13,196, was the largest in any year since in 1903, the infection was spread by pilgrims returning from fairs. Bengal contributed the largest increase to the rise in small-pox mortality, 32,785 cases occurring there as against 9,935 in 1914, and an average of 9,095 for the previous three years. With the exception of the small province of Coorg, Bengal had the highest fever death-rate, 23·47. "Fever" was responsible for more than 55½ per cent. of the total mortality, only three provinces—Bombay (11·48), Burma (8·64½), and Madras (7·3) having a fever death-rate of less than 14½ per mille. The term, however, covers many causes of death, and many diseases much more fatal than malarial fever. The malaria section of the Indian Research Fund Association is housed at Kasauli, but has a field laboratory in Delhi where classes are held. Anti-malarial operations and mosquito surveys are being carried out by special officers in practically all the provinces. The measures adopted to fight malaria are the sale of quinine at cheap rates and the extirpation of mosquitoes by such methods as drainage petrolage and jungle clearing.

Plague.—Mortality increased considerably. In the Punjab, however, where the greatest number of deaths, 221,966, occurred, the epidemic, which, after heavy rains in March and early April, was the worst since 1907, practically disappeared in June with abnormally dry weather, and only re-appeared later on a small scale. The plague death-rate in this province was 11·48 per mille, but the only other provinces to reach 1 per mille were the United and Central Provinces and Bombay, with 1·46 and 2·24 respectively. In Bombay the number of deaths increased from 20,060 to 43,824. There were 27,241 deaths or ·7 per mille in Behar and Orissa. In Assam and Ajmer Merwara no deaths occurred from plague. The following table shows the mortality in all India since 1896 when the present epidemic broke out at Bombay: the highest number of deaths for India as a whole, 1,315,892, was recorded in 1907, after which the mortality declined enormously :—

1896–1900	405,644	1912	306,488
1901–1905	3,954,601	1913	217,869
1906–1910	2,520,506	1914	295,760
1911	846,873	1915	433,866

Vaccination.—The total number of vaccinations performed among the civil population during 1915-16 was 9,572,083, being an increase of 109,182 operations on the previous year's work. Of primary vaccinations 92·52 per cent. and of re-vaccinations 57·76 per cent. were successful about 34·21 per mille of the population were successfully vaccinated. The number of infants under a year old successfully vaccinated was 4,348,450 or 48·2 per cent. Calf lymph is now supplied from Government vaccine depots.

MEDICAL INSTITUTIONS.

Hospitals, Dispensaries, &c.—In 1915 the number of aided civil hospitals and dispensaries was 2,905 as against 2,856 in 1914. The number of in-patients increased to 541,549 and of out-patients to 33,032,052, and the number of operations rose to 1,356,841. There were also 856 State-special and railway hospitals with a total of 2,730,986 patients and 714 private non-aided institutions with 5,063,947 patients.

Travelling dispensaries are employed in some provinces. The Bengal Nursing Association has begun to train Indian women as nurses in Mofussil hospitals. A similar scheme was brought into force in Burma. In the United Provinces and Burma the system of charging fees to well-to-do patients was continued with success.

Medical Colleges—There are five medical colleges (Bombay, Madras, Calcutta, Lahore and Lucknow), the students in which numbered in 1915, 2,096, including 79 women. There are also 17 medical schools, the students in which numbered 2,936. There is an X-ray institution at Dehra-Dun where a class of instruction was attended by 20 students. Branch installations opened at Delhi and Simla are obtaining a large number of patients.

Pasteur institutes—There were Pasteur Institutes for anti-rabic treatment at Kasauli (Punjab) and Coonoor (Madras). The number of patients treated in the former increased to 5,046, in the latter to 1,490. A Pasteur Institute was opened at Rangoon in July; the foundation stone of another was laid at Shillong in November.

Lunatic Asylums.—The treatment of lunatics at asylums prevails on a comparatively small scale; but the asylum population is steadily increasing The number of asylums in 1915 was 21. The number of patients admitted was 2,339 as against 2,083 in 1914. The total asylum population of the year was 8,978.

Leper Asylums—There are many leper asylums, among which may be mentioned the Madras Government Leper Asylum, the Matunga Leper Home, Bombay, the Trivandrum State Leper Asyum and the Calcutta Leper Asylum. There are also many asylums or homes, frequently under some sort of Government supervision, including about 50 asylums of the Mission to Lepers.

The Tropical Diseases.

This account of the chief tropical diseases was written by Major Gordon Tucker, I.M.S., of Grant Medical College :—

If the principal scourges of the European in the tropics, namely, malaria, dysentery, and typhoid, could be removed, there would still remain the strain of climate as a source of disease and a cause of deteriorated health, not amounting for a time to actual illness, but eventually showing its effects in lessened resistance to the wear and tear of life, premature senility of the tissues, and diminished fertility. This results mainly from the transfer to a hot climate of an individual whose heat-regulating mechanism has previously adapted itself to conditions where the body temperature has to be maintained some 40° above that of the surrounding air. On arrival in a country where the temperature of the air is perhaps the same as that of the living tissues, it is obvious that there must be a sudden and violent disturbance of such mechanism. This mechanism is very complex and exists for the purpose of striking a balance between the heat formed by the changes in the tissues, and the heat lost from the lungs and by radiation from the surface of the skin. But beyond this there is no doubt a regulation of the temperature dependent in some way on the normal working of the central nervous system, as is shown by the remarkable alteration which may take place in the temperature of parts of the body when the brain has been subjected to some gross lesion.

In the tropics the amount of carbonic acid given off by the lungs is reduced about twenty per cent., the number of respirations per minute is reduced, and there is lessened activity of the lungs. This shows that there is less tissue change (or combustion) going on in the tissues, that is to say, diminished heat-production. The same is shown in the diminished amount of work done by the kidneys. As regards heat-loss, this is almost entirely effected through the skin, 70 per cent. of the heat of the body in temperate climates going off by radiation and conduction, and 15 per cent. by evaporation. When however the temperature of the tropical atmosphere rises, the loss by radiation falls to nothing, and all the heat has to be dissipated by evaporation from the surface. Consequently, practically all the work of losing heat, which strikes the balance with the heat production and maintains the body at a normal temperature, falls upon the sweat glands which are therefore in a state of continued and abnormal activity. In hot dry atmospheres the water evaporates as soon as formed, but in conditions of heat with great humidity, such as obtain during the worst months of the year in Calcutta and Bombay, the skin is kept continually moist by trickling beads of perspiration. Herein lies the comfort and healthiness of the punkah which removes excessive moisture. But it is obvious that in order to keep the temperature of the body normal there must be increased flow of blood to the surface of the body, a state quite different from the conditions under which the organs of the European have been trained. This favours those sudden chills to which Europeans are so subject, and acts prejudicially to the working of the internal organs, especially those subserving digestion. A blast of cold air coming on the congested skin in the early hours of the morning must chill the surface, causing a sudden contraction of the cutaneous vessels, and tending to produce a rapid flux of blood to the deeper parts, inducing a congestion of the mucous membrane of the bowels, and from that results the "morning diarrhœa" which is occasionally severe and exhausting. Such a state of affairs may become chronic, and so lead up to one of the climatic diarrhœas which are a frequent cause of invaliding. Moreover a sudden congestion of the liver and spleen in a person who has had malaria, may be followed by a malarial hepatitis or splenitis, and repeated attacks of these conditions may result in permanent enlargement of these organs; or at any rate, in the case of the stomach and liver, to derangement of function and so to chronic dyspepsia or insufficient manufacture of bile.

Again, the chronic hyperæmia of the skin favours the development of fungi and microbes. Hence the existence of ringworm of various kinds from which Europeans frequently suffer. There are microbes which, even in temperate climates, are found within the layers of the skin or on the surface. On account of the chronic congestion and moisture of the skin in tropical climates these microbes not only become abundant but virulent, and hence the BOILS which are often a serious affliction in the hot months. We frequently come across most distressing cases where the patient is covered from head to foot with them. When the boil comes to a head and softens it is easy to afford relief by opening each, and so relieving tension, but the worst kind is the "blind boil" which forms as a hard red mass, intensely painful and not coming to a head, and here an incision gives little relief. Until lately these cases were very unsatisfactory to treat, and patients would recover after weeks of pain and much reduced in health. Fortunately we have in the vaccine treatment a most successful method, the vaccine used being either a stock one and generally acting like magic: or, in a small percentage of cases requiring to be made from the boils themselves. In still other cases the infection of the skin causes the formation of CARBUNCLES, which are more serious but require treatment on the same lines.

Another more common condition resulting from the congestion of the skin is PRICKLY HEAT. This results from acute inflammation about the sweat glands and distention of their orifices, producing red papules and little vesicles, the site of intense itching. The trouble is believed to result from the proliferation of a particular microbe in the skin, which alters the reaction of the perspiration. Be this as it may, inoculation of the skin is likely to take place through scratching, and so to the formation of boils. In some cases the skin is so intensely inflamed that the region of the shoulders and neck feels like leather, or the surface gives the impression of sand-paper. It is a serious condition in young infants, as

the irritation prevents sleep, interferes with digestion and so promotes diarrhœa, so that this simple malady may be the starting point of a dangerous illness. Flannel next to the skin should be avoided in the hot weather as it is so liable to start the irritation. A good lotion consists of two teaspoonfuls of Eau-de-cologne in ten ounces of a 1 in 2000 solution of perchloride of mercury, dabbed on the skin and allowed to dry: followed by dusting with equal parts of boric acid powder and talc.

To avoid the heat the European flies to the punkah. The electric punkah has been one of the greatest blessings introduced during recent years into Indian towns as its use insures a good night's rest in place of the weary hours of sleeplessness which formerly wore out the temper and the mental energy of the European during the hottest months. Still this blessing is not without its attendant dangers. Most common are attacks of muscular rheumatism, sudden internal chills causing diarrhœa, attacks of colic, ordinary nasal catarrh, and sometimes bronchitis or pneumonia. The electric punkah does away with the mosquito curtain, which does not conduce to the free circulation of air, and gives good ventilation in its place.

Finally, we have the effects of a continued high temperature on the working of the nervous system. As has been remarked by the late Lt.-Col. Crombie, I.M.S., (in a valuable paper on "The measure of physical fitness for life in the Tropics," to which the writer is much indebted). "In the tropics there is going on continually and unconsciously a tax on the nervous system which is absent in temperate climates. The nervous system, especially those parts of it which regulate the temperature of the body, are always on the strain, and the result is that in time it suffers from more or less exhaustion." The mean temperature of a European in India is always about half a degree higher than it is in a temperate climate, and it may be raised to 99° or 100° after severe bodily exertion. When, under the strain of a severe hot moist and sultry season, the heat-centre gives out, or as it is said is "inhibited," we have all the serious phenomena of HEAT STROKE. But in the less marked but long drawn out process of nervous exhaustion we have the common tropical effect of deficient mental energy, generally commencing with unnatural drowsiness or loss of appetite and a yearning for stimulants, which culminate in that lowering of nerve potential which we know so well as NEURASTHENIA. This nervous disturbance due to climate is likely to be most marked, as Crombie points out, in two classes of persons, namely those who suffer from obesity, and those who are members of families which may be designated as "neuropathic," that is whose nervous systems are naturally unstable. To these may be added persons with naturally defective digestion and those who have a predisposition to gout.

To sum up, it will be seen that the effects of long residence in the tropics are real and permanent, not only in the direction of lowered bodily health, but in undue wear of the nervous system, which may not only be apparent during active service in duties involving strain, anxiety or responsibility, but also after retirement; so that the chances of longevity of the retired Indian official are not up to the normal, and the "extra" which the Insurance Office puts on such lives is not only to cover the risks incidental to life in the tropics, but also the diminished vitality of those who have survived to enjoy their pension and ease.

But there are other Indian risks, and these are most likely to affect travellers, due to the effects of heat on food. Microbes multiply with profusion in milk, and decomposition is liable to occur in meat within a very short time after killing. Milk should always be boiled; and owing to the dirt in railway dining-rooms, and in many hotels, and the carelessness of the lower type of native servant employed therein, it would be better to rely on tinned milk or on a supply of Horlick's milk tablets, when travelling long journeys by rail and in the smaller towns. Beef should never be eaten underdone, as it is a prolific source of tape-worm in India. There is also liability to contamination of food by flies and dust. Indian cooks, though among the best, have little regard for sanitation, and consequently the state of the cook-house should be carefully supervised.

MALARIA.

Attacks of malaria, dysentery, and enteric represent the principal risks to the European travelling in India. Malaria is the commonest cause of fever in the tropics and subtropics, but the risks therefrom have been greatly diminished by our complete knowledge of its causation which now permits an intelligent prophylaxis, that is, taking adequate precautions against infection. The connection of certain kinds of fever with marshy soils has been recognised from ancient times, whence its old name of paludism; and the word "malaria" itself implies the belief in the existence of an emanation of poisonous air from the water-logged ground. It is now realised that the poison is conveyed solely by mosquitoes, and by the anopheline species. There are only a few of the many anophelines which carry malaria, but all are to be regarded as dangerous.

The parasite of malaria is a delicate jelly-like body which invades the red cells of the blood, and lives at their expense. It has two life-cycles, one within the blood of the human host (endogenous and sexual), the other in the stomach and tissues of the mosquito (exogenous and sexual). But the first part of the sexual cycle is prepared for in the blood of the human host.

If the blood of a patient be taken about an hour before the occurrence of the "rigor," (the shivering-fit which marks the commencement of the attack), and examined in a thin film under a high power of the microscope, some of the red corpuscles will be found to contain bodies composed of delicate protoplasm showing minute granules of dark pigment in their substance. These bodies are the parasites. The granules represent the result of the destruction by the parasite of the red colouring-matter of the blood-cell. The

latter consequently appears paler than natural and is enlarged. In the parasite of the so-called benign tertian fever, if the blood be again examined when the rigor is commencing, the little mass of jelly is found to have divided into from twelve to twenty minute spheres all held together by the remains of the degenerated red cell, and with minute masses of pigment in the centre. Later the group of spherules has burst through the envelope that held them, and has appeared free in the blood-fluid. Many of these free spherules are attacked and absorbed by the phagocytes, but those which escape destruction effect their entrance into other red blood cells and go through the same process of sexual division, taking forty-eight hours for the process. On the time taken for this cycle to occur depends the periodicity of the fever, the attack appearing every third day, whence the name tertian fever. Another variety of malarial parasite, not very common in India, takes seventy-two hours to complete its cycle, hence called the "quartan" variety.

There is also a third kind of parasite called the "malignant tertian," called by the Italians the aestivo-autumnal parasite, which also takes forty-eight hours to go through its cycle, but which gives rise to a more irregular fever, and has more pernicious effects on the system and is also liable to produce severe nervous symptoms, such as unconsciousness, often ending in death with very high fever. Each kind of parasite has its special characteristics which can be observed by microscopical examination. Consequently expert examination of the blood is always advisable in cases of fever, not only to show that malaria is present, but also to distinguish the particular kind which is causing the trouble.

Within the blood there also appears the first stage of the sexual life of the parasite in the shape of male and female elements, which result from some of the parasites which do not undergo the usual segmentation described above, and which exist for the purpose of allowing further development in the non-human host, which in the case of this particular parasite is the mosquito. These sexual elements are especially in evidence in the blood of cases of the pernicious variety of malaria, in the form of crescentic bodies which obtain considerable protection from the phagocytes, and many therefore persist for some time in such blood. "Crescents" appear only in malignant fevers, and persons who harbour them are of course a danger to the community, inasmuch as the mosquitoes of the locality are infected from them, thus rendering such village or street unhealthy from malaria.

The sexual elements of the malarial parasites when taken into the stomach of the mosquito which sucks up the blood of its victim, undergo certain changes, the male element extruding flagellate or hair-like processes which fertilise the female. The latter thereupon changes into a body endowed with the property of locomotion, which makes its way into the coats of the stomach of the insect, and becomes divided up into a vast number of minute cysts, each of the latter becoming packed with minute rod-like bodies. The cysts rupture into the body-cavity of the mosquito, and the rods, thereby set free, become collected within the substance of the salivary glands, and ultimately make their way to the base of the proboscis. On such an infected mosquito pushing its proboscis into the human skin when it wishes to draw blood some of the rods are injected into the blood stream. They then enter red blood corpuscles and go through the various cycles described above.

From three to five days, or as long as a fortnight, after being bitten by such a mosquito the patient has an attack of fever, sometimes preceded by pains in the limbs, headache, and malaise. This is soon succeeded by a feeling of intense chill, perhaps associated with vomiting. The skin becomes cold and blue, the shivering is excessive and prolonged, constituting the "rigor" stage. In this state the patient is in great distress, and obtains little sense of relief from the blankets which he heaps up over himself. Although the surface of the body is very cold, the temperature, taken in the arm-pit or mouth, shows a rise to 103° or higher. In a quarter of an hour or more the "hot stage" comes on, the face becoming flushed, the surface of the body red and warm, the small quick pulse becoming full and bounding, and perhaps the patient complains of throbbing headache. He remains thus for a few hours and then occurs the "sweating stage," perspiration breaking out about the head and face, and soon extending to the whole body. Great relief is experienced when this is entered on, and is likely to be followed by a refreshing sleep. During the paroxysm the spleen is often enlarged and may be the seat of considerable pain. There is also often troublesome cough from a concomitant bronchitis. With repeated attacks the enlargement of the spleen is liable to become permanent, the organ coming to form a large heavy tumour with special characteristics, the so-called "ague cake," which is common among the children of malarious districts. Europeans who suffer from severe or repeated malaria are likely to suffer from permanent ill-health in the shape of anæmia, dyspepsia, or easily-induced mental fatigue.

Treatment.

The traveller in India should endeavour to guard himself against the bites of mosquitoes. This can be done to a great extent by the use of mosquito curtains, the mosquito seeking the blood of its victim mainly at night. But when travelling by train protection is difficult. There are some odours which mosquitoes appear to dislike. Sprinkling the pillows with lavender water is sometimes efficacious, or smearing the hands with lemon-grass oil. Camps should not be pitched in the neighbourhood of native villages, if it can be avoided. Travellers should provide themselves with thermometer and a supply of quinine tabloids.

During the cold stage the patient should be well covered, and hot fluids administered, unless vomiting is present. Quinine should not be taken in this stage as it increases the distress. A diaphoretic, or sweating mixture, should be administered every two or three hours until the skin becomes moist, and throughout the hot stage: this soon gives relief, and when the stage of perspiration has been reached, the

grains of quinine should be given, and repeated in five grain doses every six hours until the temperature becomes normal. Thereafter the drug should be continued for a few days in doses of five grains twice a day. This is calculated to ward off a second attack, or, at any rate, to reduce its severity and prevent a third. If there is vomiting, quinine tabloids are not likely to be digested and absorbed; in such cases the drug should be given in a mixture dissolved in a dilute acid. The advantage of quinine tabloids is that the unpleasant taste is avoided.

There are some severe continuous malarial fevers which appear to resist the action of quinine. These are the pernicious tertian fevers, which so often cause difficulty in diagnosis inasmuch as for a few days they may suggest enteric fever, especially to those inexperienced in tropical diseases. In such cases large doses of quinine are required, the skin being kept moist meanwhile by a diaphoretic mixture. Some of these fevers last for a week or longer, but the majority of them yield to quinine in three or four days. It is in such that an early examination of the blood is so useful. In certain cases of profound malarial poisoning or where, for any reason, quinine does not appear to be acting when administered by the mouth, recourse must be had to the injection of quinine into the tissues. This should always be done by a skilful physician, and with special precautions, as some cases of tetanus have occurred after quinine injections taken from stock solutions, even when apparently given with every care. The "vaporoles" prepared by Messrs. Burroughs Wellcome & Co., which consist of little glass capsules containing preparations of the drug dissolved in sterile and non-irritating fluid, appear to be absolutely devoid of risk and are very efficacious.

TYPHOID FEVER.

By Typhoid or Enteric Fever is meant a continued fever, lasting for three weeks or longer, due to the entrance into the intestinal canal of a particular bacillus (the typhoid bacillus), which not only produces serious abdominal trouble but also symptoms referable to a generalised infection of the blood by the bacillus and the poisons which it engenders. Formerly the scourge of the British Army in India, especially among the younger soldiers, it has been reduced to a very low point, through the prophylactic use of Sir Almroth Wright's vaccine, continuous attention to the sanitary condition of the soldiers' quarters, improvement of water supplies, and skilful medical treatment.

"Paratyphoid" is a term applied to certain fevers which have all the characters of typhoid, but with a rather lower mortality, and which are due to infection by bacilli which are closely related to the typhoid bacillus.

The fact that typhoid more frequently attacks the new arrivals to the tropics renders this disease one of the risks which tourists have to face, but this can be minimised by knowledge of the manner in which the typhoid bacillus affects an entrance into the system.

Typhoid Fever has now been shown to be a common affection among Indians, contrary to what was held some fifteen years ago. In Bengal and the Punjab, according to Leonard Rogers (Fevers in the Tropics), the maximum of cases for all classes occurs during the hot months, while the maximum for Bombay is in the rainy season. But taking the European cases only he finds that the largest number of cases falls within the dry, cold and hot seasons, and considers that this is due to the European being most frequently infected through contaminated dust, this class of person paying greater attention now-a-days to the condition of the water which he drinks: unlike the Indian who will drink water out of the nearest tap.

As is well known, infection of typhoid is most commonly produced by contamination of drinking water. Great care is therefore necessary in boiling and filtering drinking water and in protecting the vessels in which it is kept from contamination by dust. In the neighbourhood of all native villages the soil is laden with animal dejecta which, of course, is very likely to be associated with disease-producing microbes. Hence infection of the food in cook-houses and shops is easily produced by the wind carrying the dust from latrines and other foul areas. Uncooked vegetables produced from gardens watered by sewage-containing fluid are also very dangerous, and should be avoided by the Indian traveller. Lastly oysters taken from estuaries which receive rivers laden with organic matter from the villages on the banks are believed to afford special protection to the typhoid bacillus, and when eaten raw are dangerous.

In many cases the onset of the disease is sudden, with headache, shivering and vomiting, but in a little less than half the onset is insidious, the patient being out of sorts, slightly feverish, perhaps with occasional looseness of the bowels, loss of appetite and a little sickness. He ultimately takes to his bed, generally dating the commencement of his illness from this event, and there forthwith begins a period of at least three weeks of anxiety for his friends and relatives, inasmuch as enteric fever, as seen among Europeans in India, is characterised by its greater severity and longer duration. The temperature rises gradually day by day during the first week, remains at a fairly constant high level during the second, becomes irregular with daily remissions during the third, and in the majority of cases is succeeded by a period of convalescence, during the first part of which the greatest care in dealing with the patient is required. The bacillus produces its most important effects on the lower portion of the small intestine, certain glandular structures in the wall of the bowel becoming inflamed, enlarged, and finally ulcerated. It is on the formation of these intestinal ulcers that many of the worst complications depend. The ulcerative process favours, first a looseness of the bowels, later an exhausting diarrhœa. Moreover the destruction of some of the coats of the bowel may open up an adjacent blood vessel and produce alarming or even fatal hemorrhage. And again the whole thickness of the bowel may be perforated, causing death

from collapse and peritonitis. This is the danger which the physician has in view throughout the case. It can only be guarded against by the most careful nursing and attention to the dietary. Other dangers are bronchitis and failure of the heart, especially during the third week. During the stage of convalescence the same care has to be taken with the dietary as the ulcers are undergoing healing, and an error might lead to the rupture of one of them when all danger may well be expected to have passed. Finally, owing to the depressing effects of climate, convalescence is often attended with prolonged mental depression.

In the matter of treatment it is absolutely essential that the patient should have the benefit of skilled nursing. Fortunately highly-trained European nurses can now be obtained from any populous centre, though occasions arise when the demand exceeds the supply. If possible two nurses should be obtained for day and night duty respectively. Unless it is absolutely necessary to remove him, the patient should be nursed where he falls ill and not sent long distances by train. At the most he should travel to the nearest large town where there is a Civil Surgeon. Treatment mainly consists in keeping the fever within bounds, and thereby sparing the strain on the heart which is great during the three weeks of continued fever. This is effected in great part by the system of hydrotherapy, that is, treating the patient by continued tepid baths or by frequent sponging with tepid water to which a little toilet vinegar should be added. There is no special drug which is of any use in aborting the fever, but this does not mean that drugs are of no use in typhoid. On the contrary the complications, which are many, will be detected as they arise by the careful physician, and there is no disease which tries more than this the skill of the doctor and the care of the nurse, who will frequently bring to convalescence what seems to be an almost hopeless case. Abdominal distension, for instance, is a frequent and serious complication in Indian typhoid, and should be treated as soon as detected. It results partly from the decomposition of the intestinal contents, partly from loss of the muscular tone of the bowel. It hinders the respiration and the action of the heart, and favours the occurrence of perforation. Diet consists almost entirely of milk, either pure, diluted with barley water or whey, or as a jelly.

Lastly a word should be said about the importance of typhoid inoculation to those intending to travel in India or the tropics. It is better to have Wright's prophylactic vaccine injected before leaving home, but if this is not done, it should be submitted to on arrival in Bombay. In the majority of cases the only discomfort resulting is a little passing tenderness at the site of inoculation: in some cases there are a few hours of fever: and in the worst the patient feels out-of-sorts for twenty-four hours. The inoculation (with a larger dose) should be repeated on the eighth day. Attention to this small precaution as a routine measure would obviate most of the catastrophes which we witness on occasions among "globe-trotters" who have come to the country for pleasure or health.

DYSENTERY.

The term Dysentery is applied to several forms of infective inflammation of the large bowel, in which the principal symptoms are griping, abdominal pain, frequent straining, and the passage of a large number of evacuations characterised by the presence of blood and mucus. The changes which take place occur in the mucous membrane of the large bowel, and are first an acute catarrh succeeded by ulceration more or less extensive, and sometimes going on to gangrene.

The disease is endemic in India, and is in fact common in Eastern countries, and in Egypt. It is liable to arise in epidemic form especially among armies in the field. It is caused by a contaminated water supply, and by the infection of food by dust and flies. Dysentery is probably caused by several varieties of micro-organisms but for all practical purposes may be said to be divided into two great groups, one due to the amœba of dysentery, and the other caused by a bacillus described by Shiga and known as bacillary dysentery. The latter form is more common in Japan and in the north-eastern side of the Indian peninsula; the amœbic form being that most commonly seen in the Bombay Presidency. The bacillary form is characterised by the presence of a very large number of evacuations perhaps as many as a hundred or even more in the twenty-four hours. In the amœbic form there are seldom more than twenty evacuations in the day, and there is less fever and general depression than in the bacillary variety. In the amœbic form there is greater tendency to thickening of the bowel wall, and to the dangerous complication or sequel of abscess of the liver.

After a few days of severe illness should the patient recover there is a danger that the disease may become chronic, a condition which is associated with emaciation and profound weakness. The chronic form is also more likely to eventuate from the amœbic type.

The frequency with which it attacks Europeans in India may be judged from the admissions of the European soldiers into hospital, the figures of admissions for each of the years 1910 and 1911 being 7·7 per thousand of strength.

The treatment of the bacillary form with an anti-dysenteric serum has had good results. In the amœbic form most Indian physicians still rely, and rightly so, on the use of ipecacuanha. This has to be given with particular precautions and with a previous dose of opium to diminish the liability to vomiting. Recently, thanks to the work of Leonard Rogers, a valuable drug has been placed in our hands, in the form of emetine, an alkaloid derived from the ipecacuanha root; and which when injected into the deeper layers of the skin, gives all the good results of ipecacuanha without its unpleasant effects. It is of special value in the case of children in whom acute dysentery is a very serious disease. We have hereby obtained one more efficient weapon in the contest with one of the common diseases of India.

ABSCESS OF THE LIVER.

There are several varieties and causes of abscess of the liver but the term is applied in India to the single abscess which frequently forms as the result of amœbic dysentery, the latter generally preceding but sometimes being concomitant with the formation of the abscess. It is one of the scourges of the European in India, and is especially to be dreaded on account of the high mortality. Taking all the cases together, including the acute and chronic and all classes of the community, the death rate is about sixty per cent., but this will probably be reduced by recent improvements in the methods of diagnosis and treatment. The latest annual report of the Sanitary Commissioner with the Government of India states that next to enteric fever, hepatic abscess is the most frequent cause of death among European troops, but the admissions and deaths on account of it have decreased greatly during recent years. The report also notes that the decrease in the number of cases of liver abscess is coincident with an equally steady fall in the number of admissions to hospital for alcoholism.

The disease is most liable to attack those who, in addition to having had an attack of dysentery, have indulged, not necessarily to excess, in alcohol and general good living, and are at the same time somewhat sluggish in their habits. It is often preceded by continued fever, malaise, dyspepsia, and more or less uneasiness in the liver region, or the latter organ may be acutely enlarged and very tender. In many cases the exact diagnosis is often a matter of anxiety, but greater precision is now possible as we have come to recognise what Rogers has called the presuppurative stage of amœbic hepatitis, which is very amenable to treatment by ipecacuanha or injections of emetine. The use of this method will often prevent the case going on to the dangerous condition of abscess, which when it has once definitely formed can only be dealt with by prompt operation, which in itself has a high mortality. Further aid is now obtained by special examination of the blood and by the use of the X-rays, which will often clear up a doubtful case.

The abscess generally forms in the right lobe of the liver. Should it form on the left side it is especially liable to rupture into one of the internal organs.

The same complication may eventuate when the abscess forms on the right side. Here the principal point of rupture is into the right lung, the contents of the abscess being suddenly evacuated, in some cases without much warning, and nature thereby effecting a cure. Such a termination however is not desirable as healing will take place quicker by surgical means.

There are some abscesses which are exceedingly insidious, it often happening that patients are sent home with a fever associated with general loss of health and weight, where the existence of a deep seated abscess may not even be suspected, but in which the symptoms of hepatic abscess suddenly occur and clear up the case: or the correct diagnosis may obtrude itself by the sudden rupture as above described.

PLAGUE.

Plague is a disease of very great antiquity; its ravages and symptoms have been described with remarkable accuracy by the old historians, such as Procopius. Not many years ago it appeared to be a disease of historical interest only, but the present pandemic, which commenced about 1894, has made it a subject of the greatest importance to the inhabitants of the British Empire. It was in March 1894 that it first became prominent in Canton, and thereafter it spread to Hongkong, Macao and Pakhoi, and so along the whole of the Southern China Coast. It probably arrived in Bombay in March 1896, but it was not until the end of September that it became noticeable in that part of the native city known as Mandvi, in which the great grain supplies are collected, and wherein consequently there is an enormous rat population. In October of the same year the presence of the pestilence was officially acknowledged. Everything which the limited knowledge of the subject at that time suggested, was done to check its spread; but, in spite of all efforts, the pestilence spread from the infected city throughout the greater portion of the Peninsula, and while its ravages of late years have not been so terrible as at its first appearance, yet the disease still takes its annual toll of human life, and it has apparently become one of the endemic diseases of India. According to the official figures, Plague since its appearance has been responsible for more than seven and a half million deaths within the limits of the Indian Empire. These figures should perhaps be increased by about fifteen to twenty per cent., due to defect in the registration of the causes of deaths and also to the fact that the disease often simulates other maladies for which it is likely to be mistaken by an uneducated population.

Plague is an acute infection of the blood by a bacillus which was discovered by Kitasato in Hongkong in 1894. It generally affects its entry by the skin, on which it is deposited by the rat-flea. At the site of deposit a small pustule is occasionally found which soon forms a superficial ulcer. In such cases inflammation and distention of the lymphatics may be noticed running from the neighbourhood of the small and painful ulcer to the nearest group of glands. These will be found to be enlarged and exquisitely tender, the tenderness being out of all proportion to the size of the glandular enlargement and to the amount of local inflammation. This glandular enlargement is called the Bubo, which has given the name to the most common form of the pest—Bubonic Plague.

With the appearance of the Bubo, or even a day or so before it, there is evidence of a general infection of the system, in the shape of extreme prostration, mental confusion, a furred tongue, and fever which is generally high. The pulse is accelerated, and while at the outset, especially in full-blooded muscular adults, it is likely to be full and bounding, there is sooner or later, generally soon, evidence of early failure of the strength of the cardio-vascular system. The pulse becomes quicker, smaller, and the heart

sounds feeble. As the case progresses, the primary ulcer will enlarge and become of an angry appearance, the Bubo will also enlarge and the tissues around the inflamed lymphatics will be swollen and œdematous. To this variety the term "cellulo-cutaneous plague" has been applied. The spreading ulcer, which is really a local gangrene, has been described as the plague "carbuncle"; these forming on the skin of those affected were often referred to by old historians as a prominent feature in many ancient epidemics.

These cases however are somewhat uncommon. The usual variety met with is the Acute Bubonic Plague. In this the patient is attacked with fever, and all the general symptoms of an acute infection, and on the first, second or sometimes the third day of the illness the characteristic bubo appears. The common site is among the glands of the groin, for the reason that these glands receive the lymphatics from the lower limbs and from the lower portion of the trunk up to the level of the navel, a larger area than that drained by any other group of glands. Other sites for Bubo formation are the arm-pits, the glands of the neck, those about the angle of the jaw and below the chin, and very rarely the little gland on the inner side and just above the elbow, and the small glands behind the knee joint. In some cases, generally in association with Buboes in the groin, the deep glands of the abdomen can be felt to be enlarged.

These Plague Buboes are of different kinds and it is a matter of some importance in connection with treatment and the outlook as regards recovery, to recognise the type of Bubo present in each particular case. The common variety is the "softening bubo." The enlargement increases somewhat rapidly and the hard swelling gives place to a soft doughy mass around which is a limited amount of serous effusion into the subcutaneous tissues. If the patient lives till the fifth day or thereabouts this bubo will feel like a tightly stuffed pincushion, or may give the experienced examiner the signs that the contents are of a fluid nature. On incision, pus and shreds of the disorganised gland will be evacuated, and under suitable treatment the cavity, though large, will heal up within a week or so. When these softening Buboes are allowed to rupture spontaneously a large foul cavity is produced; such are not unfrequently encountered among the poor, who have not received adequate attention during the stress of a plague epidemic.

Another variety of bubo obtains when the glands inflame and harden, the inflammation being so acute that the blood supply of the part is obstructed and the whole of the affected area sloughs out, leaving a large superficial ulcer of a very unpleasant appearance. These buboes are found where the inflamed glands are bound down beneath tense tissues, as in front of the ears and in the region of the groin. To this kind the term "indurated bubo" has been applied. Another variety the "œdomatous bubo" occurs in the neck and the arm-pit and in them the serous effusion into the tissues around the glands, present to a less extent in the common type is the essential feature. The whole arm-pit or the side of the neck may be distended by the accumulation of fluid under the skin. It is an extremely distressing kind of bubo, as the pain is great and nearly all the patients die. Also there is a rare kind the "hard late bubo," which appears after about a fortnight in cases simulating typhoid fever, and lastly there are some soft buboes which abort and shrink with the rapid subsidence of the fever—the "shrinking bubo." The fever continues from the outset with slight emissions; it is generally about 103° to 104°, but it may rise to a great height from almost the initial rigor. On the third day the temperature tends to approach the normal, and almost immediately rises again. Should it rise to a point above that of the maximum temperature preceding the remission the outlook is bad; but in cases which are likely to do well it rises to a point which is less than that of the preceding maximum, and after about three days gradually falls to normal, with slight daily oscillations depending on the amount of the suppuration in the buboes and their local condition.

It is to be understood that this disease is of such great virulence to human beings, on account of the early appearance of the plague bacillus in the blood-stream, that there are many instances in which death occurs before the bubo has had time to undergo the changes described above or even to form. The more acute cases are also liable to be a typical in their mode of onset. Some are taken with a wild delirium in which they are likely to attack those about them: others suffer from vomiting of blood followed by rapid failure of the heart and death: pregnant women miscarry and practically all of them die: and lastly there are cases where the general and local symptoms are slight and yet failure of the heart may suddenly ensue within a few hours of the onset. These so-called "fulminant" cases are generally met with at the commencement of every epidemic: in some of the descriptions of mediæval epidemics they seem to have been in the majority, and it is on account of these that plague epidemics appear so terrible to the occupants of the plague-stricken town. Fortunately, however, there is a large majority of cases which allow some scope for medical skill. The condition of the patient after the full development of the symptoms is always one which gives rise to great anxiety. The mental condition becomes dulled, which, while it mitigates considerably the distress of the sufferer, is nevertheless an indication of the action of the plague poison on the nerve centres. The eyes are suffused and often acutely congested. There may be cough, which is a bad sign as it indicates either a secondary pneumonia or the onset of an acute bronchitis, the direct result of the failure of the heart. If the latter progresses the breathing becomes more rapid, the pulse weak and almost uncountable at the wrist, the skin cold and clammy, and towards the end covered by profuse perspiration: finally, the breathing becomes irregular, and after several long-drawn gasps the patient breathes his last.

In other cases however improvement starts about the fourth day, the temperature gradually falls, and the mind clears: the bubo suppurates in due course and heals up, and the patient passes into a slow convalescence, but which is sometimes retarded by the formation of chronic

abscesses, boils, attacks of heart failure or of palpitation: or ulcers of the eyeball with infection of the whole globe and consequent loss of sight. Some recover with permanent mental enfeeblement, or persistent tremors of the limbs with difficulty in speaking with clearness.

Septicaemic Plague.

This term is applied to certain forms of acute plague where buboes do not form, or where there is uniform but slight enlargement of glands in various parts of the body with symptoms of a general blood infection. The term is misleading, inasmuch as most cases of acute bubonic plague are really septicaemic from the outset. These cases are either acute, ending fatally about the third day or sooner: or are sub-acute, with symptoms simulating typhoid fever, ending fatally in about a fortnight. In the acute cases large dusky patches of blood-effusions beneath the skin, the so-called plague spots, are sometimes found; and there may be hæmorrhages from the stomach or bowels.

Pneumonic Plague.

In this variety the plague bacillus proliferates in the lung and causes rapid consolidation of large patches of the lung tissue scattered irregularly throughout the organs; with a considerable amount of œdema, so that the lungs are engorged with blood, are large and heavy, and the bronchial tubes filled with reddish frothy fluid which contains the plague bacillus in almost pure culture. The fever is very high and the interference with respiration immediate, and death occurs from the second to the fourth day. A curious fact about pneumonic plague is that one such case is liable to give rise to others of the same type.

Treatment of the Disease.

No serum or antitoxin has so far proved of value in diminishing the mortality of the sick. Much can, however, be done by medical treatment. Absolute rest is required and the patient should not even be allowed to sit up in bed. Drugs which act as heart stimulants are required almost from the outset, and frequently these have to be administered by the skin as well as the mouth. The buboes should be fomented till they soften, and incised as soon as fluid is formed. For the pneumonic condition the administration of oxygen gas gives relief. This can be obtained in India without much difficulty. Careful nursing is essential, and fluid nourishment must be given regularly in an easily assimilable form, and complications have to be met as they arise. As regards prophylaxis by means of Haffkine's Plague prophylactic which is manufactured in enormous quantities at the Bacteriological Government Laboratory at Parel, it may be said that its use gives a threefold chance of escape from attack and a reduction of case mortality by fifty per cent.

DENGUE FEVER.

Dengue fever, otherwise known as Dandy fever or Breakbone fever, is rather common in India and is generally present in the larger towns, but as it appears in manifold forms and various writers describe it differently, its identity is not always recognised; and, therefore, by many medical men is thought to be less common than it really is. On occasions it gives rise to very wide-spread epidemics. In 1902 there was an extensive epidemic on the eastern side of the Indian Peninsula, and quite recently there has been a bad outbreak in Calcutta. It is more common during the rainy season.

The onset is abrupt, with fever, slight sore throat producing cough, rapidity of the pulse, sometimes a red rash which is so fugitive that it is often overlooked, and intense pain. These pains constitute the patient's chief complaint. They are generally pains in the bones, or in the small of the back, or in some of the joints either large or small. Sometimes there is no complaint of pain in the limbs, but there is intense pain behind the eyes. The fever lasts for three or four days, during which in rare cases there may be further symptoms due to the appearance of a pleurisy or even a pericarditis. Sometimes there is intense shooting pain into the little finger. Though the intensity of the symptoms may give a very serious aspect to the case, yet a fatal issue is almost unknown. After the four days of intense suffering the fever subsides somewhat abruptly, and at about this time a second rash appears, most marked over the shoulders and neck, and on the backs of the arms, or else an universal rash. It is of a dark red colour, often very like the rash of scarlet fever, or it may be like that of measles. With its appearance the more severe symptoms subside. During convalescence the patient is much depressed, and the pulse remains unduly rapid. Sometimes also pain starts again in one of the joints, or he is crippled by stiffness of the back or of several of the joints. After a shorter or longer period, from two days to ten, a second attack of fever and pain comes on which runs the same course but as a rule less severe and prolonged; in very rare cases there is a third attack.

There is no drug which will cut short the disease. From its likeness to rheumatism the salicylates are generally used, and perhaps relieve the pains. This drug should be combined with an ordinary fever mixture: large doses of bromide should be given for the headache, and the excruciating pains must be treated with morphia.

It is often impossible to distinguish the malady from influenza until the appearance of the rash.

It is believed that the poison is conveyed by the bites of a mosquito, and that this poison has characters which are analogous to the virus of Yellow Fever.

CHOLERA.

This is one of the most important diseases of India, having been endemic therein for many hundreds of years. It is always present in the country, and sometimes extends over large districts generally from some crowded centre such as the site of a pilgrimage, from which it is dispersed over the country-side by the returning bands of pilgrims. The deaths in British India from this disease in 1911 numbered three hundred and fifty-four thousand and in the following year four hundred and seven thousand. The disease is of special importance to the numerous

pilgrims both on going to and returning from Mecca.

It is essentially a water-borne disease and the exciting cause is the "comma bacillus" discovered by Koch, so called from its shape when isolated and stained. The dejecta of a person suffering from the disease, when contaminating the soil, are liable to get washed by the rains into some water-supply, which may become the source of almost unlimited infection. Such contaminated drinking water is rendered innocuous by boiling, or filtration through a Pasteur-Chamberland filter. The importance of Koch's discovery, therefore, lay in the recognition of the fact that the poison was essentially water-borne. It can also be conveyed by flies settling on food.

The disease has an incubation period of from two to seven days. After a premonitory diarrhœa with colicky pains lasting for half a day or longer, the nature of the illness is announced by violent purging and vomiting, the former having the peculiar character of rice-water. The poison may be so intense that death takes place before the purging appears, the so-called "cholera sicca." In the common form collapse is early and marked, the extremities are blue and cold, the skin shrunken, the heart weak, the surface temperature below normal, though the temperature taken in the mouth shows high fever to be present. There is a curious pinched expression of the face with deeply sunken eyes, and the patient endeavours to communicate his wishes or fears in a hoarse whisper. He is further distressed by painful cramps in the muscles of the calf and abdomen, and there is suppression of the functions of the kidneys. Death generally takes place in this the algid state. Should the patient survive he passes into the stage of reaction, the unfavourable symptoms disappearing and gradually passing into convalescence. In some of these cases which give hopes of recovery there is a relapse, the conditions of the algid state re-appearing and death taking place. It has recently been recognised as a cause of the dissemination of the disease, that patients who have recovered will continue to discharge the bacillus for many weeks.

The prevention of cholera lies in attention to water supplies, and in boiling and filtering as a matter of routine in Indian life. All the discharges from the sick should be treated with disinfectants, and soiled clothing and linen destroyed. People who have to tour in cholera-stricken districts, or who go on shooting excursions, or who find themselves in the midst of a cholera outbreak should undergo inoculation with Haffkine's preventive vaccine. Two inoculations are required, the second being more intense in its effects. The temporary symptoms which may arise after the inoculation are sometimes severe, being always more marked than after inoculation against typhoid, but the protection afforded more than makes up for the temporary inconvenience endured.

During the cholera season the mildest cases of diarrhœa should be brought for treatment to a physician, as such persons are more liable than others to contract the disease.

Treatment mainly resolves itself into meeting the extreme collapse with stimulants and warmth. There is great temptation to administer opium but in some cases this is not unattended with danger, and in others there is no capacity left in the patient for the absorption of drugs administered by the mouth. The mortality has, however, been reduced by the injection of saline fluid into the skin or directly into the veins, and also by the introduction of saline fluid of particular strength into the abdominal cavity.

Kala-Azar.

This is a slowly progressive disease associated with great enlargement of the spleen and some enlargement of the liver, extreme emaciation, and a fever of a peculiar type characterised by remissions for short periods, and due to infection by a parasite of remarkable characters which have only recently been worked out. It is attended with a very high mortality, about 96 per cent., and has up to the present resisted all methods of treatment, although some patients appear to improve for a time, only in the majority of cases to relapse later.

It is endemic in Assam, from which it has invaded Bengal, and is now often seen in Calcutta. It is also fairly often met with in Madras, though it is said that the cases are imported ones. It is very rarely seen in Bombay, and then only in immigrants from infected localities, though there appears to be a mild endemic centre in Jabalpur in the Central Provinces; so it is likely to be more frequently met with on the western side of India. It has caused great mortality among the coolies on the tea-plantations of Assam, especially among the children; but under the recent measures of prophylaxis which have been put into force since knowledge has been acquired about its real nature and method of spread, the ravages of the disease are likely to be limited. It is very rare among Europeans and then almost entirely among those who have been long in India or who have been born and bred in the country.

Infection seems generally to start in the cold weather. There is fever with rigors, and progressive wasting and loss of energy. The temperature chart is a curious one, the fever showing two remissions during the twenty-four hours. Diarrhœa is common, especially during the later stages of the disease. The spleen enlarges early and is generally of enormous size producing bulging of the abdomen. A remarkable feature is the tendency to the formation of ulcers, which in many cases, especially in children, takes the form of a gangrenous ulceration of the mouth and cheek. Death usually occurs from some intercurrent inflammatory condition, often pneumonia.

The parasite is found in the spleen and liver during life, and can be obtained by puncture of these organs. As thus obtained it is a minute round body of special characters. In this state it is known as the Leishman-Donovan body from its discoverers. This small body has been cultivated by Leonard Rogers in suitable media and under low temperatures, and found to develop into a flagellated, that is tail-possessing; organism. How this peculiar

organism develops outside the human host is not yet completely known. It is certainly a house-infection, which accounts for the manner in which whole families have been swept off, one member after another. Its progress has been stayed by moving families from their infected houses and burning down their former quarters. This, and other facts connected with its spread, have suggested that the agent for conveying the poison from man to man is the common bed-bug, and Patton has succeeded in developing the flagellate stage in this creature when fed on the blood of the sick.

There is a severe form of ulceration of the skin known as "Delhi Boil" from which organisms very similar to the Leishman-Donovan body were obtained many years ago. These bodies have also been cultivated outside the human host and found to develop into a flagellated organism. The two parasites, though closely allied, are nevertheless distinct.

DRUG CULTURE.

Two monographs on the cultivation of drugs in India, by Mr. David Hooper, of the Indian Museum, Calcutta, and by Mr. Puran Singh, of the Indian Forest Department, Dehra Dun, have lately been published. Mr. Hooper, in his paper, states that one-half of the drugs in the British Pharmacopœia are indigenous to the East Indies, and nearly the whole of the rest could be cultivated or exploited. The following are given as those that could be grown in quantity and as worthy of the attention of cultivators and capitalists:—

Belladonna, most of which is still imported, grows well in the Western Himalayas from Simla to Kashmir, the Indian-grown plant containing 0·4 to 0·45 per cent. of alkaloid.

Digitalis is quite acclimatised on the Nilgiris, growing there without any attention. The Madras Store Department obtains all its requirements from Ootacamund, and the leaf has been found equally active to that grown in England.

Henbane is a native of the temperate Himalayas from 8,000 to 11,000 ft. It was introduced into the Botanic Gardens, Saharanpur, in 1840, and it has been steadily cultivated there up to the present time, and the products supplied to medical depots satisfy the annual demand.

Ipecacuanha has been raised with a small measure of success in the hilly parts of India, and it only requires care and attention to raise it in sufficient amount to make it commercially remunerative.

Jalap-root grows as easily as potatoes in the Nilgiris, and there is no reason why the annual requirements (about 4,000 lbs.) for the Medical Stores of Bengal, Bombay and Madras should not be obtained from Ootacamund.

Mr. Puran Singh discussed the subject in a number of the "Indian Forester in 1914": he states that most of the drugs in the British Pharmacopœia grow wild in India, and that there is already a large export trade for some of them. He adds, however, that materials collected at random cannot be expected to fetch full prices, as they seldom come up to standard quality, and he adds: "The few drugs that are not indigenous to India could easily be made to grow in some part or other of this vast land. The great advantage accruing from the systematic cultivation of drugs is that a regular supply of genuine drugs of standard quality is assured. The variation in the quality of wild-grown drugs is sometimes a very serious drawback to finding a profitable market for them. The quality of *Podophyllum Emodi* growing wild in India is an illustration in point. This plant was discovered by Sir George Watt in the year 1888, and now, even after twenty-four years, in which it has been shown to be identical with the American drug that is being employed for pharmaceutical purposes, it still remains unrecognised by the British Pharmacopœia, which, as explained by the "Chemist and Druggist" some time ago, is solely due to the uncertainty which still exists as to its physiological activity".

Mr. Singh also points out that the Indian consumers of medicine depend mostly on herbs growing wild in the Forests, the more important of these probably numbering at least 1,000. This inland trade is very large; the possibilities in the Punjab alone being put at Rs. 50,00,000. He mentions saffron, liquorice, and salep as products exotic to India, whose cultivation in this country looks full of promise. Mr. Singh suggests that a complete survey be made of the extent of the inland trade in medicinal products found growing wild in Indian forests in order to arrive at the figures of annual consumption, and that the forest areas where the most important drugs grow should be preserved. Inquiries should be instituted as to the best methods of cultivation, and if need be, the means of extending the artificial propagation. It is to provide data to induce the private capitalist to embark on such enterprises that Mr Singh advocates the formation of some body to go into the matter. He suggests that India is well worthy of attention by those in this country who are interested in extending the culture

of drugs in the British Empire. The Forest Department has already begun the cultivation of Indian podophyllum-root in the Punjab, United Provinces and the North-Western Frontier, and several maunds of dried rhizome are sold annually for local consumption. Mr. Hooper also shows that a start has been made in regard to the cultivation of belladonna. henbane and digitalis. One of the principal difficulties to be overcome is to ensure a ready market, and there is also always the danger of overproduction to be considered.

Essential Oils.

SANDALWOOD OIL is, by far the most important perfumery product of India. The sandalwood tree is a root parasite, obtaining its nourishment from the roots of other trees by means of suckers. It grows best in loose volcanic soil mixed with rocks, and preferably ferruginous in character. Although in rich soil it grows more luxuriantly, less scented wood is formed, and at an altitude of 700 feet it is said to be totally devoid of scent. The best yield of oil is obtained from trees growing at an altitude of 1,500 to 4,000 feet, but the tree requires plenty of room so as to enable it to select vigorous hosts to feed it.

PALMAROSA OIL, also known as Indian geranium or "Turkish geranium oil" is another of the principal perfume products of India. It is derived from the grass, *Cymbopogon Martini*, which is widely distributed in India, where it is known as "Motya." Gingergrass is an oil of inferior qual ty, possibly derived from older grasses or from a different variety of the same species. Both oils contain geraniol, the proportion in palmarosa being from 75 to 95 per cent. and in gingergrass generally less than 70 per cent. These oils are used in soap, perfumery, and for scenting hair oils and pomades.

LEMONGRASS OIL is derived from *Cymbopogon citratus* and *Cymbopogon flexuosus*. The former is a native of Bengal, and is largely cultivated all over India, but the oil distilled on the Malabar Coast and Cochin is derived principally from *C. flexuosus*.

VETIVER, OR CUS-CUS, is a perennial grass, *Vetivera zizanoides*, found along the Coromandel Coast and in Mysore, Bengal and Burma, in most heavy soil along the banks of rivers. The leaves are practically odourless and only used for thatching and weaving purposes. The roots are used in perfumery and in the manufacture of mats and baskets.

THE MALABAR CARDAMOM, *Elettaria cardamomum*, is the source of the seeds official in the British and other Pharmacopœias. Cardamom oil of commerce is, however, not distilled from this variety on account of the high price, but is obtained almost exclusively from the long cardamom found growing wild and cultivated in Ceylon. The oil is used medicinally as a carminative and is also employed by perfumers in France and America.

COSTUS ROOT (the root of *Saussurea lappa*) is a native of Kashmir, where about 2,000,000 lbs. are collected annually. It is exported in large quantities to China where it is used for incense. It is also used to protect shawls and clothes from the attacks of insects. Its odour resembles that of orris root.

BLUMEA BALSAMIFERA is the source of the Nagal camphor used in China for ritualistic and medicinal purposes. This shrubby composite is found in the Himalayas and is indigenous to India. It is widely distributed in India and is used by the natives against flies and other insects.

EUCALYPTUS plantations are situated chiefly in the neighbourhood of Ootacamund, Coonoor, and Wellington, at elevations varying from 5,500 to 8,400 feet, the best being at from 7,200 to 8,000 feet. The climate of this region is fairly cool, equable and moist, with a well-distributed rainfall of about 50 to 80 inches; although frosts occur, the winters are mild on the whole, and snow is unknown. The soil, a red clay overlying gneissose rock, is rich and deep in some parts, shallow and poorer in others. A large factory is being built for the distillation of eucalyptus oil at Ootacamund. It is believed there is a considerable future for the undertaking, provided a sufficient supply of the leaves is available.

Manufacture of Quinine.

Government Cinchona plantations were started in India in 1862 from seed introduced by Sir Clements Markham from South America, of which the plant is a native. There are two main centres, Darjeeling and the Nilgiri Hills. In both localities a portion of the area is owned by tea or coffee planters, and the bark they produce is either sold to the Government or exported. Several species of cinchona are cultivated in India: namely, *Cinchona succirubra* (red bark), *C. calisaya* and *ledgeriana* (yellow bark), and *C. officinalis* (crown bark). The commonest species in Darjeeling is *C. ledgeriana*, and in Southern India *C. officinalis*. A hybrid form is also largely grown and yields a good bark. At the Government factories both cinchona febrifuge and quinine are made. Thanks to these factories, practically no quinine is nowadays imported for Government purposes.

THE REPORT OF THE GOVERNMENT CINCHONA plantations and factory in Bengal for 1915-16 stated that from 1900 to 1916 the total expenditure amounted to Rs. 42,65,600 and the total receipts to Rs. 39,30,000. The deficit, however, was incurred within the period 1905-14, during which time great improvements were carried out in the Department. In view of the fact that the world's demand for quinine was exceeding the output and there was danger of the abolition of the open market in the drug, it was decided to purchase large quantities of bark and quinine at the low prices then ruling and at the same time to extend the plantations so as to render the Department independent of external supplies. The outcome of this policy was highly satisfactory and in two years, 1913-15, the saving to the Government was at least Rs. 4,66,000. The deficit, the report stated, would be speedily replaced by a surplus, yearly increasing, and meanwhile it was covered many times over by readily realisable assets. These assets included additions to factory and machinery

that have quintupled its output, 2,295 acres planted with cinchona valued at Rs. 7,69,000, a reserve of quinine of the value of nearly Rs. 19 lakhs, and other manufactured products and bark valued at Rs. 2,05,055, making a total of Rs. 29,18,000. One of the most far-reaching measures of modern times for the benefit of the health of the people of India has been Sir George King's system of having quinine, locally produced from cinchona, made up in 7-grain packets and sold (since 1896-7) for a quarter anna (one farthing) at every post office in India. This scheme has proved a commercial success, and has been of immense benefit to the inhabitants of fever-stricken tracts. In the year 1912-13, 10,694 lbs. of quinine were sold at the post offices.

Intoxicating Drugs.

Among the drugs which are of great medicinal value, but of which the misuse has been a source of crime and disease among the people of India, there are, in addition to cocaine, **Opium** (for details of the trade see article on opium) which is the oldest and the best known. A resolution of the Government of India, dated August 19, 1912, adopted the policy of suppressing all public gatherings for the purpose of smoking opium and of prohibiting all manufacture of opium smoking preparations save by an individual of a small quantity for his own private consumption. The form which legislation should take was left to the local Governments, provided that an assembly of three or more persons for the purpose of smoking opium should be made illegal. In adopting this policy Government distinguished between opium smoking and opium eating. "Opium, said the Resolution, as taken in moderation by the average Indian is eaten either as a mild stimulant, or as a prophylactic against malaria, or for the relief of pain or in the treatment of diabetes. It is in fact a house-hold remedy for many ills, and it is safe to say that as a national habit the eating of opium is less injurious than is the consumption of alcohol in many other countries. Centuries of inherited experience have taught the people of India discretion in the use of the drug, and its misuse is a negligible feature in India life. These conclusions were accepted by the Shanghai Commission (of 1909) who, while they recommended the gradual suppression of the practice of opium smoking, refrained from advising the abandonment of the policy of regulation by which the practice of opium eating in the country has hitherto been successfully kept under restraint."

Next to opium and cocaine, the most common drugs are the three **hemp** products which are freely used throughout British India. The Indian hemp is a shrub growing wild in the hills and lower elevations, and cultivated in the plains. The leaves of the wild plants, collected and dried in the sun, constitute **bhang**, a sort of green tea, which is mixed with boiling water and drunk as an infusion. This has an exhilarating effect, followed by a feeling of intoxication. When the female plants are cultivated they exude a resinous juice, which causes the flowering tops to stick together. Collected under these conditions the tops are rolled in the hands or pressed under foot; the first process produces "round ganja," and the second "flat ganga." **Ganja** is a stronger form of hemp than bhang, and is used for smoking. The third form of Indian hemp is **charas**, the resinous secretion of the plant that develops when it is grown at certain altitudes. Large quantities of charas are produced in Chinese Turkestan, and enter India by way of Leh. This is sold over the northern part of the country, and used for smoking purposes.

The Cocaine Traffic.

The form of cocaine chiefly used in India is Cocaine Hydrochloride. This salt forms light shining crystals, with a bitterish taste, and is soluble in half its weight of water. The alkaloid cocaine—of which this is a salt—is obtained from the dried leaves of the Erythroxylon Cocaine which grows in Bolivia, Peru, Java, Brazil and other parts of South America. The leaves are most active when freshly dried and are much used by the Natives as a stimulant. Tea made from them has a taste similar to green tea and is said to be very effectual in keeping people awake. In India the Coca plant seems never to have been cultivated on a commercial scale. It has been grown experimentally in the tea districts of Ceylon, Bengal and Southern India and has been found to produce a good quality and quantity of cocaine. As the plant has not been seriously cultivated and as there is no possibility for the present of the drug being manufactured in India, no restrictions have as yet been placed on its cultivation.

Spread of the habit.—The cocaine traffic in India which seems to be reaching alarming proportions in spite of legislation and strict preventive measures is of comparatively recent growth; though it is impossible to estimate how widespread it was in 1903 when the Bombay High Court for the first time decided that cocaine was a drug included within the definition of an intoxicating drug in the Bombay Abkari Act. Since that date the illegal sale of cocaine in India has largely increased and the various provincial Excise Reports bear witness to the spread of the "Cocaine habit." The consumers of the drug, which is notoriously harmful, are to be found in all classes of society and in Burma even school children are reported to be its victims; but in India as in Paris the drug is mostly used by prostitutes or by men as an aphrodisiac. The habit has spread chiefly to those classes which are prohibited by religion or caste rules from partaking of liquor and the well known Indian intoxicating drugs.

Imports from Europe.—Cocaine and its allied drugs are not manufactured in India, but are imported from Germany, France, England and Italy. Most of the drug which is smuggled into India, comes from Germany and bears the mark of the well-known house of E. Merck, Darmstadt. This firm issues cocaine in flat packets of various sizes ranging from 1 to 3 ounces which are easily packed away with other articles and greatly favour the methods of smugglers. Owing to its strength and purity cocaine eaters prefer this brand to any other in the market. Restrictions on export from Europe have been under consideration for some time but as yet no international scheme devised to that end has been agreed upon.

Smuggling.—So far as the cases already detected show, the persons who smuggle the drug by sea from Europe and places outside India, into India, are chiefly sailors, stewards, firemen and sometimes engineers and officers of the Austrian Lloyd and Florio Rubattino S. S. Companies. The ports through which cocaine enters India are Bombay, Karachi, Calcutta, Madras, Marmagoa and Pondicherry. The main inland distributing centres are Delhi, Lucknow, Meerut, Lahore, Mooltan, Surat and Ahmedabad. Delhi especially is notorious for the cocaine trade. Great ingenuity is employed in smuggling cocaine through the Custom houses. It is packed in parcels of newspapers, books, toys and piece-goods and in trunks which have secret compartments. The retail trade in the towns is very cunningly organized and controlled. In addition to the actual retailers, there is a whole army of watchmen and patrols whose duty is to shadow the Excise and Police Officials and give the alarm when a raid is contemplated. Owing to the war and the consequent diminution of supplies the cocaine hawking trade has practically disappeared in Bombay. The largest seizures of cocaine made during the year 1916-17 were 11,655 grains by the Police Department 4,244 grains by the Customs and 851 grains by the Excise Department. Since the outbreak of the war attempts have been made to smuggle Japanese cocaine into Bombay.

Price.—The amount seized is either given to Hospitals in India or destroyed. It is no longer possible to buy cocaine from any betelnut seller as it was ten years ago, but scores of cases in the Police Courts show that the retail trade thrives, though to a diminished extent, in Bombay. High profits ensure the continuance of the trade. At present the English quotation is 33 shillings and 2 pence per ounce and the price as sold by licensed chemists in India is about Rs. 36 per ounce. Owing to the war and the consequent stoppage of illicit importations from Austria and Germany it is not possible to buy the smuggled drug from the wholesale dealers for less than Rs. 100 to 120 per ounce and when sold by the grain the price realized varies from Rs. 400 to 425 per ounce. These profits are further enhanced by adulteration with phenacetin and inferior quinine.

The law in regard to Cocaine.—This varies in different provinces. A summary of the law in Bombay is as follows: No cocaine can be imported except by a licensed dealer and importation by means of the post is entirely prohibited. The sale, possession, transport and export of cocaine are prohibited except under a license or permit from the Collector of the District. A duly qualified and licensed Medical practitioner is allowed to transport or remove 20 grains in the exercise of his profession; and as far as 6 grains may be possessed by any person if covered by a *bona fide* prescription from a duly qualified Medical practitioner. The maximum punishment for illegal sale, possession, transport, etc., under Act V of 1878 as amended by Act XII of 1912 is as follows: Imprisonment for at term which may extend to one year or fine which may extend to Rs. 2,000 or both and on any subsequent conviction imprisonment for a term which may extend to 2 years or fine which may extend to Rs. 4,000 or both. The law in Bombay has been further amended so as to enable security to be taken from persons who have been convicted of cocaine offences. The new Act also contains a section for the punishment of house owners who let their houses to habitual cocaine sellers.

INDIAN TOBACCO.

The tobacco plant was ntroduced into India by the Portuguese about the year 1605. As in other parts of the world, it passed through a period of persecution, but its ultimate distribution over India is one of the numerous examples of the avidity with which advantageous new crops or appliances are adopted by the Indian agriculturist. Five or six species of *Nicotiana* are cultivated, but only two are found in India, namely, *N. Tabacum* and *N. rustica*. The former is a native of South or Central America, and is the common tobacco of India. About the year 1829 experiments were conducted by the East India Company towards improving the quality of leaf and perfecting the native methods of curing and manufacturing tobacco. These were often repeated, and gradually the industry became identified with three great centres: namely, (1) Eastern and Northern Bengal (more especially the District of Rangpur); (2) Madras, Trichinopoly, Dindigul, Coconada and Calicut in Southern India; and (3) Rangoon and Moulmein in Burma. Bengal is the chief tobacco growing Province, but little or no tobacco is manufactured there. The chief factories are near Dindigul in the Madras Presidency, though, owing to the imposition of heavy import duties on the foreign leaf used as a cigar wrapper, some cigar factories have been moved to the French territory of Pondicherry.

The question of improving the quality of Indian tobaccos has received the attention of the Botanical section of the Agricultural Research Institute, Pusa, and three Memoirs have been published recording the results of investigations in that direction. The immediate problem at Pusa is the production of a good cigarette tobacco. Many attempts have been made in the past to introduce into India the best varieties of cigarette tobacco from America, but the results have been disappointing. It is now hoped to build up by hybridization new kinds of tobacco, suited to Indian conditions of growth, which possess in addition the qualities necessary to obtain a better price.

Mr. James McKenna in his recent report on "Agriculture in India" writes:—

"The ordinary Burman and Indian cigar has an increasing popularity—about 1¼ million pounds are exported—and exports increase. It is a cheap and a good cigar, but it is capable of improvement, principally by a better outer leaf or wrapper of finer tobacco. We should therefore aim at increasing the outturn of genuine Indian cigars, improved, as they can be, without loss of their individuality, by the selection of leaf, and at decreasing the imports of foreign cigarettes by producing tobacco suitable for this purpose. The present coarse varieties seem to meet the local taste and that of our main export markets, which are Aden and its Dependencies and the Far East. There is, however, no reason why these local varieties should not be brought to their highest perfection by selection or why improvements should not be possible in curing. The most pressing commercial problem, however, is to oust the foreign cigarette. This question has been taken in hand in Bengal and Bombay, where efforts are being made to establish exotics. These have met with only qualified success. We can only say, so far, that experiments continue, but whether they will prove commercially successful remains to be proved and indeed seems somewhat doubtful." That the process of ousting the foreign cigarette is well advanced may be seen from the latest report on the Maritime Trade of Bengal, which remarks "The cheap Indian-made cigarettee continues in great demand, the largest supplying centre being Monghyr, where perhaps the most up-to-date factory in the world turns out incredible quantities daily. From the railway station for this factory no less than 10,632,000 lbs. were exported in 1916-17.

The annual average import of tobacco into India is valued at Rs. 71,07,000. In 1915-16 this figure rose to Rs 80,15,000 and in 1916-17 to Rs 1,25,13,000. The increase in imports is accounted for by the larger receipts of cigarette and also by a higher level of prices for manufactured tobacco. The imports of cigarettes from the United Kingdom reached the record figure of £2,230,000 out of the total imports £2,404,000. There was also a large increase in the imports from the United States and Australia. The number of cigarettes imported was 906 millions as compared with 636 millions in the preceding year and 633 millions, the pre-war average. The increase was largerly due to the large demands for army purposes.

The value of the exports of tobacco was Rs. 52,00,000.

Tata Iron and Steel Co., Ltd.

The Tata Iron and Steel undertaking is the greatest of the modern industrial enterprises in India and will rank with the large concerns of the kind in Europe and America. The gigantic project owed its inception to the genius and enterprise of the late Mr. Jamsetjee Tata, of the firm of Messrs. Tata Sons & Co. Before the formation of the Company, the best brains of Europe and America were utilised in examining into the possibility of establishing in India a great iron and steel industry on a paying basis, and no efforts were spared to render the investigation as thorough as possible. No less than Rs. 5,50,000 was spent in the investigation before Messrs. Tata Sons & Co. established to their satisfaction that such works could be erected in India with every reasonable prospect of success. The site eventually fixed upon was at Sakchi, a village in the Singhbhum District of Chota Nagpur, some two miles from the station of Kalimati on the Bengal Nagpur Railway.

Within reasonable distance of Sakchi, which bids fair to become the Pittsburg of India, very large deposits of high grade iron ore were discovered in proximity to coal of a coking character suitable for the manufacture of pig iron at a very low figure. Two rich fields containing very large supplies of this ore were secured on suitable leases by Messrs. Tata Sons & Co., one situated in the State of Mourbhanj and the other in the Raipur District, the intention being to limit operations for the present to the Mourbhanj Hills, in which 7,000,000 tons of ore had been proved to exist on the lower ridges alone. Numerous analyses have proved this ore to contain on an average over 60 per cent. of metallic iron. The royalties payable under the leases, based on an annual output of 2,50,000 tons, average 2.4 annas per ton for the first 30 years and five annas per ton for the succeeding 30 years. These ore beds are some 40 miles by rail from the site of the company's works.

Messrs. Tata Sons & Co. received from the Company in full settlement for the transfer of all mining rights, concessions, leases, etc., which they have acquired, and in full settlement of all expenses of investigation incurred by them prior to the formation of the Company, 20,000 fully paid-up Ordinary Shares of Rs. 75 each, equivalent to a payment of Rs. 15,00,000 and in addition a lump sum of Rs. 5,25,000 in cash. In addition to these payments the syndicate of gentlemen who were instrumental in the actual formation of the Company received as remuneration for their services, 1,300 fully paid-up Ordinary shares, equivalent to a payment of Rs. 97,500.

Sakchi Works.

The Company's works were originally designed for an annual output of 120,000 tons of pig iron, and the conversion of 85,000 tons into 72,000 tons of finished steel. The average imports into India of iron and steel of the classes which it was intended to produce amounted to approximately 450,000 tons per annum, so that the company had at its doors a market largely in excess of its present productive capacity. On all ore sold as ore or exported, Messrs. Tata Sons & Co., are entitled to a royalty of 4 annas a ton. The company further possesses considerable manganese properties at Ramrama in the Central Provinces, which have already been connected by rail with the Bengal Nagpur Railway and are a source of considerable revenue.

The following concessions were granted by the Government of India to the Company:—

(1) The purchase by the State of 20,000 tons of steel rails annually for a period of ten years subject to the condition that the rails comply with the Government specification and that the prices be not more than the prices at which similar rails can be delivered *c.i.f.* if imported into India.

(2) A reduced rate of 1·15 of a pie per maund per mile, equivalent to .15 of an anna per ton mile, on all raw materials to the works, subject to a minimum mileage charge and to revision at the end of 10 years. The reduced rate has also been made applicable to all finished products and by products despatched for shipment from Calcutta.

The entire cost of the original works, excluding the present extensions and inclusive of the purchase of mining rights, collieries, and all charges incurred in the construction of the town of Sakchi, for the housing of the small army of the company's employes, was put down at Rs. 2,40,00,000 and it was estimated that on the average prices ruling during the ten years 1896 to 1905 the manufacturing profit, assuming a sale of 35,000 tons of pig iron and 72,000 tons of finished steel, would, after meeting working expenses, depreciations, etc., amount to Rs. 24,15,000. This sum, it was calculated, would after meeting interest on debentures and commission payable to the Managing Agents, enable the Company to pay the stipulated dividends of 6 per cent. on the preference capital, 8 per cent. on the ordinary capital, and 25 per cent. on the deferred capital, and leave a surplus of approximately Rs. 7,15,000 for distribution in equal shares between the ordinary and deferred capital. The above estimate of profits was made on the original capacity of the works, but since then two more open-hearth furnaces have been added and other improvements made in the plant, thus increasing the capacity of the works.

Finance.

The Company was registered on 26th August, 1907. The Chairman of the Board of Directors is Sir D. J. Tata, Kt. (Tata Sons & Co.), Special Director. The following figures explain the financial arrangements of the company, including provision for great extensions sanctioned in 1916. Capital authorised and issued Rs. 3,52,12,500 - Ordinary Capital Rs. 2,62,50,000. Preference Capital Rs. 75,00,000. Deferred Capital Rs. 14,62,500. Capital subscribed on the 30th June 1917 Rs. 2,31,75,000—Ordinary Capital Rs. 1,50,00,000. Preference Capital Rs. 75,00,000. Deferred Capital Rs. 6,75,000. Amount called up Rs. 2,31,75,000—Ordinary Shares Rs. 1,50,00,000. Preference Shares 75,00,000. Deferred Shares Rs. 6,75,000. In addition Debenture Capital to the extent of Rs. 1,01,00,000 was issued. Also, 1½ crores are to be taken from the present large profits towards the new capital and 1½ crores Preference Capital may be issued.

Present Position.

The Company's original construction work was started in August 1907, and the construction and equipment of the work were regarded as practically completed by the end of June, 1912, at a total capital outlay on that date of Rs. 1,25,00,000. The blast furnaces worked well from the start and turned out pig iron of excellent quality. The steel furnaces gave a considerable amount of initial trouble, but these difficulties were completely overcome. The annual report of the Company, issued in October, 1917, showed a net profit during the year ending 30th June, 1917, amounting to Rs. 1,10,76,692 which with the sum brought forward from the preceding year's account, made a total sum of Rs. 1,11,54,915. Dividend was paid on Preference Shares for the twelve months ending 30th June 1917, at the rate of 6 per cent. per annum less income tax, on Ordinary Shares at the rate of 20 per cent. per annum and on Deferred shares 291 per cent. per annum, both free of income-tax. The Chairman of the Company in the course of his speach at the annual meeting in October 1917 remarked with satisfaction upon the valuable aid the Company had been privileged to give Goverument in connection with the war and said the war had taught them that they must spare no efforts now to develop all their resources, not only in their own interest, but in that of the Empire with whose destinies their are linked:

"One of the immediate effects of the war will be a shortage of tonnage. And I may say in this connection that your Company has begun seriously to think how best it can serve the future commerce of this country by supplying her with tonnage built from your steel and in Indian Shipyards. We hope to have Plate Mills working at Sakchi. As a matter of fact it was one of the earliest extensions we contemplated. And I am ardently looking forward to the day when this country will supply her share of shipping to the world, a prospect which I may state is not beyond the pale of practical achievement..... But I hope we shall not rest content there. The war has taught us also the lesson how strong a defence the commerce of the world needs against the ravages of marauders. I trust, we in India shall not rest content till we produce in this country ships and armaments of war for the defence of our trade and shores with the co-operation of Government and the large British armament manufacturers....."

Exploration in Mourbhanj State resulted in the location of eight deposits of iron ore within from 12 to 23 miles from the present mines, all being surface deposits which can be mined easily and cheaply. Test pits indicate the presence of about double the amount at the present mines and of at least equal quality. The magnesite deposits in Mysore State are being worked at present, furnishing magnesite to the Kumardhubi Brick Works for being made into bricks for Sakchi; also deposits of both iron ore and chrome ore have been located in this State, the chrome ore having been already exported to the works. The coal properties of the Indian Collieries Syndicate, Ltd., with all their rights, have been purchased. A Mining Lease has been taken out for coal in Korea State in the Central Provinces and prospecting licenses have been taken in several other districts for other minerals.

The Company's Employes.

The daily average number of employees of the Company in 1917 was 10,225 men and women. The number of European covenanted hands was 93 and the number of local European employes 51. The balance of labour is Indian. In addition to the labour employed at Sakchi mentioned above, the Company gives employment to approximately 6,000 labourers at its various mines and collieries. The above figures do not include the employés of contractors engaged in the work of improvements or extensions. Various important welfare schemes for the benefit of the employes have engaged the mind of the Board of Directors and the Management. They have a hospital where the employes and outsiders are treated free of charge. The number of patients treated in this hospital for the year ending 31st December 1916 comes to about 154,857, out of whom 40 to 45 per cent. were outsiders. There is a Convalescence Fund from the interest of which poor employés who have no money to support themselves during the period of convalescence are helped. As the want of a Convalescent Home is much felt, arrangements are being made to have one built on the *top of* a neighbouring hill. There are three schools at present in Sakchi (*a*) Mrs. Perin Memorial School, (*b*) a Night School and (*c*) a Mechanics' School. The Mrs. Perin Memorial School is a Middle English School. The average number of boys attending it is about 162. It is supported partly by the Company and partly by a Government grant-in-aid. In the Night School, chokras and other employés of the Company who are desirous of learning English and Mathematics get free tuition every evening for two hours. The number of employes attending the Night School is about 70. In the Mechanics School promising young boys of the mistri class employed at the Works are taught elementary mathematics and drawing with a view to make them more efficient in their work. This school is also supported partly by the Company and partly by a Government grant. It has been proposed by the Government of Bihar and Orissa to start a Technological College at Sakchi, with the help of this Company.

Arrangemnts are also being made to interest the Servants of India Society to start (*a*) a Girls' School, (*b*) primary schools in the surrounding villages whence the employes are drawn, (*c*) a Co-operative Stores for coolie and mistry class of workmen to enable them to buy the necessaries of life at a reasonable rate, and (*d*) Credit Societies to help the workmen out of the clutches of local money-lenders. Further, as soon as the Criminal Tribes Act is passed for this district by the Bihar and Orissa Government it has been decided to build a settlement at Sakchi for the ghasis, or sweeper class of this district, to whom most of the crimes at Sakchi have been traced. This settlement will be placed under a trained officer of the Salvation Army, the object being to reform these ghasis and make them useful employés of the Company.

The Company has also built a fine Institute for its employés, containing a concert hall, a restaurant, billiard and reading rooms, tennis courts, cricket and football grounds and a bowling alley. Any employé of the Company can become a member of this Institute without distinction of pay, colour or creed. For the convenience of employés living in G. Town the Company has recently built a branch Institute in that quarter.

The Company, realising the harmful effect of long hours on workmen, has recently introduced in all its operative departments, coke ovens, blast furnaces, steel works and rolling mills, a shift of 8 hours instead of the 12 hours which is the usual practice in Indian factories.

Extensions.

Owing to the increasing demand for the Company's products, extensions of the Company's works on a large scale are under contemplation whereby the works will be equipped to produce about 350 to 400 thousand tons of finished Steel per annum. There will be a corresponding increase of coke ovens, blast furnaces, open hearth furnaces; also of the power plant and water supply.

Industries Commission.

A resolution issued by the Government of India in May, 1916, announced the appointment of a Commission to examine and report upon the possibilities of further industrial development in India and to submit its recommendations with special reference to the following questions:—(*a*) Whether new openings for the profitable employment of Indian capital in commerce and industry can be indicated; (*b*) Whether and if so in what manner Government can usefully give direct encouragement to the industrial development: (1) By rendering technical advice more freely available; (2) by the demonstration of the practical possibility on a commercial scale of particular industries; (3) by affording directly or indirectly financial assistance to industrial enterprises, or (4) by any other means which are not incompatible with the existing fiscal policy of the Government of India.

Scope of the Inquiry.—A note on the nquiry was issued in September which said:—The scattered information already available regarding the resources of India in raw material, the suitability of the people for expert labour and the probable financial resources of the country, is sufficient to show that there are room and opportunity for a very substantial development of manufacturing and other industries.

It will be the business of the Commission, after establishing this fundamental proposition by a critical analysis of the facts, to suggest the most profitable lines of action with the object:—

(*a*) of drawing out capital now lying idle;

(*b*) of building up an artizan population;

(*c*) of carrying on the scientific and technical researches required to test the known raw materials and to design and improve processes of manufacture;

(*d*) of distributing the information obtained from researches and from the results of experience in other countries; and

(*e*) of developing the machinery for

(1) financing industrial undertakings and

(2) marketing products.

Subjects Excluded.—The original Resolution expressly directed that certain matters should be excluded from consideration. In framing the terms of reference, said the Resolution, it has been found necessary to exclude two matters from the scope of the Commission's labours. In the first place any consideration of the present fiscal policy of the Government of India has been excluded from its enquiries. When introducing the financial statement in the Legislative Council the honourable the Finance Member, it will be remembered, stated in connection with the question of the cotton duties that the general fiscal relationship, which exists between the various parts of the Empire and other countries must in the opinion of His Majesty's Government be reconsidered after the war, and that in the meantime they wish to postpone any action that would tend to raise such questions. The same considerations apply with even greater force to any proposals involving the imposition of duties for the specific purpose of protecting Indian industries, a policy which would very directly affect the fiscal relations of India with the outside world. In the next place it is not proposed that the Commission should re-examine those aspects of technical and industrial education which have recently been dealt with by a committee working in England and India, whose reports are at present under the consideration of the Government of India.

Personnel.—The Commission, as originally appointed, consisted of the following gentlemen: President Sir T. H. Holland. Members:—Mr. Chatterton, Sir Fazulbhoy Currimbhoy Ebrahim, Mr. E. Hopkinson, Mr. C. E. Low, C.S., Pandit Madan Mohan Malaviya, Sir R. N. Mukerjee, the Rt. Hon. Sir Horace Plunkett, Mr. F. H. Stewart and Sir D. J. Tata.

Sir Horace Plunkett was unable to serve on account of ill-health.

Mr. R. D. Bell, I.C.S., was appointed Secretary of the Commission.

The commission met in October 1916 and proceeded on tour, but in February, 1917, the appointment of Sir Thomas Holland to the presidency of the newly constituted Indian Munitions Board necessitated an interruption of the Commission's work for some months. The tour was resumed in November, 1917. Sir Thomas Holland presided over the opening session in Bombay, after which he left the Commission and returned to his duties on the Munitions Board. The presidency of the commission was assumed by Sir Rajendranath Mukerji.

Calcutta Improvement Trust.

The Calcutta Improvement Trust was instituted by Government in January, 1912, the preamble of the Act by which it is founded running as follows:—"Whereas it is expedient to make provision for the improvement and expansion of Calcutta by opening up congested areas, laying out or altering streets, providing open spaces for purposes of ventilation or recreation, demolishing or constructing buildings, acquiring land for the said purposes and for the re-housing of persons of the poorer and working classes displaced by the execution of improvement schemes."

The origin of the Calcutta Improvement Trust must, as in the case of the corresponding Bombay body, upon which the Calcutta Trust was to a large extent modelled, be looked for in the medical enquiry which was instituted into the sanitary condition of the town in 1896, owing to the outbreak of plague. In consequence of the facts then brought to light, a Building Commission was appointed in April 1897, to consider what amendments were required in the law relating to buildings and streets in Calcutta. That Commission recommended certain alterations in the law, and further suggested that a scheme should be prepared for laying out those portions of the town which were sparsely covered with masonry. While unable to go into details, they recommended that in quarters newly laid out the roads and open spaces should occupy at least as much ground as the building areas. As regards existing evils, they thought that it was impossible to demolish any considerable portions of the City. All that could be done was to open out a number of wide streets and some open spaces. The Government of Bengal, when it proposed to give effect to the recommendations of the Commission, adopted, as the work to be done, a scheme for constructing and improving 15¼ miles of roads which had been drawn up by the Commission. This scheme formed the basis of discussion till 1904, when a Conference was convened by Sir Andrew Fraser, then Lieutenant-Governor of Bengal. It was estimated that the Trust might in the ensuing 30 years have to provide for the housing of 225,000 persons, who would occupy 2,000 acres. The population of Calcutta proper, which includes all the most crowded areas, was 649,995 in 1891, and increased to 801,251, or by 25 per cent., by 1901. The corresponding figure according to the 1911 Census was 896,067.

The Conference of 1904 recognised that in view of the peculiar situation of Calcutta, which is shut in on one side by the Hooghly and on the other by the Salt Lakes, its extension in a regular zone is impossible. The Conference, after carefully considering the question, came to the conclusion that "arms" or "promontories" should be thrown out in five directions: on the north, north-east, east, south and south-east, and south-west. In these promontories it was easy to foresee that expansion would take place along the lines indicated by certain roads. It is for this reason that the Government of Bengal made the proposal that the Trust should have power to project roads to the outskirts of Calcutta. It was seen that strips of land lying along or in the neighbourhood of these roads should be acquired by or for the Trust and would be dealt with by them as model areas. In the remaining part of the extension, according to the Government's plan, the Trust would have no proprietary rights over the land, but they would administer the building regulations and by this means would secure that all houses erected by private owners were constructed on a standard plan and in conformity with sanitary requirements.

Legislation.

The recommendations of the 1904 Conference eventually took legislative form in a Bill introduced in the Bengal Legislative Council in August, 1910. This measure was built up on the recognition by the Government that the 15 miles road scheme only touched the fringe of the question of overcrowding and sanitation. The Bill, therefore, provided for a scheme of greatly enlarged scope. The amount of money required was roughly estimated at Rs. 8,22,00,000. It was recognised that a great deal more could be spent with advantage, and the figure was not put forward as representing the actual cost of any definite scheme, but as a rough estimate of what would be required for any scheme of wide and permanent utility. The total sum was divided into Rs. 500 lakhs for new roads, Rs. 172 lakhs for open spaces and Rs. 150 lakhs for housing and expansion. Of these sums Rs. 336 lakhs were to be recovered by recoupment, 50 lakhs were granted from Imperial revenues, and the remainder was left to be raised by loans. The sanction of the Secretary of State was obtained for the proposals generally on the understanding that the scheme of taxation would be for 60 years. The Legislative enactment, while based on these calculations, does not actually refer to any limit of expenditure. But the Act provides a special system of taxation for the service of the loans, amounting to Rs. 436 lakhs, involved in the scheme. For this service an annual revenue of 19·65 lakhs was required and to this have to be added 1·25 lakhs for working expenses and contingencies, bringing the total up to 20·90 lakhs. To provide this revenue the Act provides for the levy of special taxes as follows:—

A two per cent. stamp duty on the value of all immoveable property transferred by sale, gift or reversion of mortgage;
A terminal tax of one anna on every passenger by rail or steamer arriving in the city of Calcutta; this is not to be levied on passengers from within a radius of 30 miles of Calcutta;
A customs and excise duty, not exceeding two annas per bale of 400 lbs., on raw jute;
A two per cent. consolidated Corporation rate; and
An annual Government grant of a lakh and a half.

The Act provides for the appointment of a whole time chairman of the trustees and the membership of the Trust was fixed at eleven, part of the members being nominated by Government and others elected by local bodies whose interests are most nearly concerned.

The following are the present Board of Trustees:—The Hon'ble Mr. C. H. Bompas, I.C.S., *Chairman*. The Hon'ble Mr. S.W. Goode, I.C.S., Ag. Chairman of the Calcutta Municipal Corporation (*ex-officio*); The Hon'ble Raja Reshee Case Law, C.I.E., elected by the Corporation; The Hon'ble Rai Radha Charan Pal, Bahadur, elected by the Ward Commissioners; Dr. Charles Banks, elected by the Commissioners appointed under Sec. 8 (2) of the Calcutta Municipal Act, 1899; Mr. W. K Dods, elected by the Bengal Chamber of Commerce; The Hon'ble Rai Sitanath Rai Bahadur, elected by the Bengal National Chamber of Commerce; Sir R. N. Mookerjee, K.C.I.E.; Sir F. H. Stewart, Kt., C.I.E.; The Hon. Mr. A. Birkmyre and Rai Annada Prosad Sarkar, Bahadur, appointed by the Bengal Government.

The Board and their Work.

It was impossible to settle in advance the exact projects to be undertaken by the Trust. All details of these were, therefore, left to be worked out by the Trust after its constitution, Government exercising control by having all the individual schemes sent to them for approval before execution. The Trust did not enter on a virgin field. The Municipal Corporation had previously dealt in some measure with the problems they were appointed to solve and the Trust started work with the initial benefit of this previous labour. Thus, the Corporation had aligned many roads and this work was useful to the Trust, though in some cases modifications were necessary.

The work upon which the Trust are now definitely embarked may be divided into three classes as follows:—

Many parts of Calcutta are over-crowded with buildings and ill-provided with roads. These areas are to be re-arranged both on the ground of sanitation and for convenience of traffic;

Population will continue to throng into the overcrowded parts unless it can live on the outskirts and at the same time have speedy access to the business centres of the town. Quick traffic can only take place along broad roads. These are almost wanting in Calcutta. The construction of broad roads will at the same time ventilate the overcrowded parts of the town and it has been recognised from the outset that the construction of broad roads running both north and south and east and west will thus secure a double object;

There is the question of providing for the population displaced by improvements, and still more important of providing for the natural growth of population by laying-out roads and building sites on sparsely populated areas on the outskirts of the town. When persons of the working class are displaced or likely to be displaced the Trust can build dwellings for them if private enterprise does not undertake the work.

Engineer's Survey.

The Trust perceived at once that the problem of providing improved traffic facilities for Calcutta and its suburbs must be dealt with as a single problem and by a single mind. The first duty set by the Trust to their chief engineer was, therefore, to prepare a scheme of main roads of primary importance. The chief engineer Mr. E. P. Richards, M.I.C.E., &c., devoted his whole attention to this task and his report was issued early in 1914. Mr. Richards' report, which was accompanied by maps and numerous photographic illustrations, made a volume of 400 closely printed foolscap pages. He found Calcutta "a city which is in a very much more than ordinary bad way", and early discovered the serious fact that "the Calcutta Improvement Act of 1911 was almost useless for the great task set to the Trust". The Trust was not constituted under a Town Planning Act but only under a local Housing Act, so that "Calcutta and her suburbs cannot possibly be jointly planned or controlled, or be moderately improved, under the existing Improvement Act." Mr. Richards' report deals with the general conditions and needs of the city and the general policy of reform, with the general legislative and financial aspects and with the main programme of work. He discusses the Calcutta of to-day, showing the chief faults as to which improvements are required. A comparison is made between Calcutta and other cities, by way of illustrating Calcutta needs, and in this manner finance, roads and streets per square mile, road and street widths, percentage of open spaces, tramway mileage per head of population, the status of the city as a port, and so on, are fully dealt with. An important chapter deals with the Calcutta slums and makes recommendations as to what should be done in regard to them. Another chapter discusses the general problem of city improvement and another is devoted to suburban planning and developments.

Improvement Schemes.

The Engineer submitted early in 1915 an interesting report on the widening of Howrah Bridge. Meanwhile, the Board undertook certain improvement schemes which would not be interfered with by any larger schemes adopted later. The Board also embarked on a re-housing scheme with a view to provide accommodation for persons likely to be displaced by the improved schemes under preparation. The buildings designed resemble those erected by the Bombay Improvement Trust. The scheme was sanctioned by Government in August, 1912, but its execution has proved more expensive than was anticipated, mainly owing to the rise in the price of building materials. The following paragraph from the Calcutta Improvement Trust's first annual report shows the standard according to which they regard their re-housing plans:—

"The housing problem in Calcutta is of supreme importance; the figures of the last census show that much of the improvement in the health of Calcutta is only apparent; the sanitary measures of the Corporation result in the removal of bustees and the population which occupied the bustees does not find healthier accommodation in the same locality but moves on to even more insanitary bustees in the suburban wards or in the adjacent suburban municipalities. The Board do not anticipate, nor do they desire, that the

chawl should become the usual dwelling for the poor of Calcutta, but it may be suitable to some classes of its heterogeneous population, and especially to those who come here for work, leaving their families behind. It is very difficult to see what other class of building can be erected by the capitalist where land costs more than Rs. 600 a cottah. On really cheap land it is possible that good results could be obtained by arranging for the construction of sanitary bustees, the Board merely laying-out and draining the site and controlling the class of hut erected." The Board undertook the erection of three blocks of buildings as an experiment. The cost of the land worked out at Rs. 832 a cottah. It is recognized in England that the working classes cannot profitably be housed on land costing more than £800 an acre, or Rs. 75 a cottah. There will, therefore, be a loss on the Calcutta experiment, as was anticipated by the Board from the outset. "It appears, therefore," say the Trustees in their 1914 report, "that the buildings would show a fair return of capital if the rooms in the two upper storeys were let out at Rs. 6 a month, those on the ground floor at Rs. 5 a month and the shops at Rs. 10."

The Board believed the buildings to be much cheaper than anything of the kind hitherto erected in Calcutta, and applications received showed that "there would apparently be no difficulty in filling a building with tenants of the Bengali middle class, if the whole building or the two upper storeys of each block were exclusively reserved for their use. The Board, however, in their 1914-15 report, stated that they "consider that it is most important to ascertain what rent can be paid and what accommodation is required by the artisan and labouring classes. They have, therefore, decided to let the rooms at lower rates to artisans and labourers and if the buildings once become popular, it will doubtless be possible to raise the rents at a later period."

A year's experience on these lines showed that the buildings were popular, though they did not become fully occupied, and the rent recovered gave a return of 8 per cent. on the capital expenditure. The Trust in their next report said that one reason why the dwellings were not fully occupied was probably the fact that in the search for cheap land the Trust placed the buildings too near the boundary of the Municipal Corporation area. "People of the poorer classes who are willing to live so far from the centre of Calcutta generally prefer to cross the boundary into Maniktala Municipality, which is only a hundred yards away and where rent and rates are less, though the sanitary conditions are deplorable". The Trust find reason to believe that similar buildings near the centre of Calcutta would let at more remunerative rates. Meanwhile it was decided to admit tenants of other than the working classes and this led to an immediate inrush of petty clerks and students.

The approximate area of land taken possession of by the Trust up to 31st March 1917 was 305.11 acres, out of 503.62 acres notified for acquisition: out of this, 25.55 acres were transferred to the Engineer, 5.04 acres sold, 1.08 acres leased and 46.11 acres let temporarily and the balance of 227.33 acres was vacant.

Thirteen improvement schemes were sanctioned by Government up to the end of 1915-16. None was added last year. The estimated cost of these schemes is—

Land—gross	.. ..	.. 207 lakhs.
,, nett	.. ..	.. 46 ,,
Works	.. ..	.. 53 ,,

and they provide for 8-8 miles of new roads and 8.3 miles of widened roads. Work at first proceeded satisfactorily, but it then received a severe check as a result of legal proceedings, which resulted in a decision by the Appellate Bench of the High Court that the law does not authorise the Trust, when executing a street-scheme, to acquire any land outside the line of the roads, whether for the purpose of laying out the land along the roads or for the purpose of recouping part of the cost of executing by selling at an enhanced price the land abutting on and improved by the road. In all the schemes already sanctioned by Government provision was made for the acquisition of land on each side of the new roads for the double purpose of securing a proper lay out and of reducing the net cost of the schemes by recoupment arising out of the resale of the lands. The effect of the judgment was that Government could sanction none of the schemes prepared by the Trust. A new Act passed in 1915 gives the Trust power to lay down lines of projected streets and prohibit the erection of buildings within them.

The plan of the main roads for the City of Calcutta proper, *i.e.*, the area within Circular Road, may now be considered assettled, although all the Improvement Schemes and Alignments under which they will be constructed have not yet received the sanction of Government. To give access from the growing suburbs in the south-east of the town, Park street, the only diagonal radial of Calcutta, will be widened to 84 feet, and further north, an additional approach to the centre of the town will be afforded by a new diagonal road. As regards the Suburban Area, all the main east and west roads are continued beyond Circular road so as to give access to the suburbs, and an outer Circular-road will eventually be formed through the southern suburbs of Calcutta.

It has been impossible to make any progress with the preparation of a scheme of main roads for the northern suburbs of Calcutta, that is to say, for the area falling within Maniktala, Cossipore-Chitpore, and Baranagore Municipalities, owing to the proposal to bring the Grand Trunk Canal from Eastern Bengal to a terminus within the limits of the Maniktala Municipality and to make a branch connection with the Hooghly running through Cossipore-Chitpore and Baranagore. Until this scheme is definitely adopted or abandoned all projects for drainage, water-supply and road improvement in those areas must be held in abeyance.

It was estimated in the Joint Report of 1913 that the cost of land required for the roads in the City proper, would be

Gross	.. ..	..Rs. 7,00 Lakhs.
Nett	.. ..	.. ,, 3,27 ,,

The estimates for the roads now proposed amount to

Gross	.. ..	..Rs. 10,35 Lakhs.
Nett	.. ..	.. ,, 3,25 ,,

BOMBAY IMPROVEMENT TRUST.

Bombay is an island twelve miles long, but very narrow and containing only 22 square miles altogether, but in the city, occupying little more than half the island, there lives a population enumerated at 972,892 and actually totalling over a million. Bombay is, in point of population, the second city of the British Empire. Seventy-six per cent. of its million people live in one-roomed tenements. Imagine the terrible conditions of overcrowding and lack of sanitation which these facts imply and you have the reason why the severe onset of plague eighteen years ago led to the formation of the Improvement Trust, for the special purpose of ameliorating the sanitary condition of the city. Plague was imported into India from the Far East and was first discovered in Bombay in 1896. There was a great panic among the population. Every house had its victims, most persons attacked died. There was a general flight of the population to the country districts. It is estimated that nearly half a million so fled. Grass grew in the principal streets. These circumstances directed the attention of the authorities, as nothing else could have done, to the problem of bringing the development and housing arrangements of the city into line with modern requirements. It was at once recognised that the task was too great for the Municipality, and a special body, termed the Trustees for the Improvement of the City of Bombay, was appointed. It consists of 14 members, of whom four are elected by the Municipality and one each by the Chamber of Commerce, the Millowners' Association and the Port Trust, and the balance nominated by Government, or sit *ex-officio* as officers of Government. The Board is presided over by a whole-time chairman (who has hitherto always been either a covenanted civilian or an officer of the Public Works Department) and he is also head of the executive. The present chairman and members of the Trust are as follow:—

Chairman—

Mr. J. P. Orr, C.S.I., I.C.S.

Ex-officio Trustees—

Maj.-General W. C. Knight, C.S.I. C.B., D.S.O., A.D.C., General Officer Commanding Bombay District.

Mr. W. C. Shepherd, I.C.S., J.P., Collector of Bombay.

Mr. P. W. Monie, I.C.S., J.P., Municipal Commissioner for the City of Bombay.

Elected by the Corporation—

Sir Bhalchandra Krishna Bhatawadekar, Kt., L.M., J.P.

The Hon. Sir Dinsha Edulji Wacha, Kt., J.P.

The Hon'ble Sir Ibrahim Rahimtoola, Kt., C.I.E., J.P.

Mr. Cowasji Jehangir Readymoney, J. P.

Elected by the Chamber of Commerce—

Mr. A. M. Tod, J. P.

Elected by the Port Trustees—

Sir F. L. Sprott. Kt., J.P.

Elected by the Millowners' Association—

Sir Sassoon David, Bart., J.P.

Nominated by Government—

Mr. A. H. Whyte, J.P., P.W.D.

Major H. A. L. Hepper, R.E., J.P.

The Hon. Mr. Lalubhai Samaldas Mehta, C.I.E., J. P.

The specific duties of the Trust are to construct new and widen old streets, open out crowded localities, reclaim lands from the sea to provide room for expansion, and construct sanitary dwellings for the poor.

The Sanitary Problem.

Bombay city grew on haphazard lines, houses being added as population poured in with the growth of trade and without any regard to town planning or the sanitary requirements of a great town. The price of land was always comparatively high, owing to the small area of the island, and while the builder had only one object in view, namely, to collect as many rent paying tenants as possible on the smallest possible piece of land, there were no proper restraints to compel him to observe the most ordinary rules of hygiene. The result was the erection of great houses, sometimes five and six storeys high, constituting mere nests of rooms. There was no adequate restriction as to the height of these chawls, or the provision of surrounding open space, so that the elementary rules as to the admission of light and air went unobserved and the house builder invariably erected a building extending right up to the margins of his site. Consequently, great houses accommodating from a few hundred to as many as four thousand tenants were built with no more than two or three feet between any two of them and with hundreds of rooms having no opening at all into the outer air.

The Trust has practically reconstructed large areas on modern sanitary lines, but the old municipal by-laws having unfortunately remained quite inadequate for the due control of private building operations by the Municipality, the Trust have spent *millions sterling* of public money in sweeping away abuses, while unscrupulous landlords, still unchecked, added in the same old manner to the insanitary conditions of the place. Thus, the Trust acquire and destroy insanitary houses on a certain area and lease the sites and permit new houses to be built on them subject to the reservation of a certain breadth of open ground round the edges of the site to provide for the necessary angle of light and air for the lower rooms of the new building But bordering on this area there will be old houses that were not acquired as part of the improvement scheme and the municipal by-laws have allowed the owners of these to increase their height by one or more storeys without regard to the fact that they were thus undoing the very work of providing for the admission of light and air upon which the Trust had just poured out money. The private

landlords have taken the fullest advantage of the loophole. The amendment of the Municipal by-laws so as to cure such abuses has been under discussion by the Municipal Corporation for many years and improved by-laws have been prepared. They are still under consideration by the Municipal Committee.

Finance.

The work with which the Trust was charged was bound to prove unremunerative, with the exception of reclamations from the sea, and at the outset, therefore, certain Government and Municipal lands were vested in the Trust, the usufruct of which it enjoys, and the Trust at the outset received a contribution from municipal revenues not exceeding 2 per cent. on the rateable value of the property assessed for taxation. In practice, the works are financed out of 4 per cent. loans, which are guaranteed by the Municipality and the Government, and the revenue of the Trust is used to meet interest and sinking fund charges. The Trust, proceeding on these lines, found itself, in 1910, at the end of its resources. When the Trust was constituted it was estimated that the usufruct on the public land vested in it would represent a contribution of Rs. 96,00,000 (£640,000) from the general taxpayer. But in practice this was reduced to less than Rs. 43,00,000 (£286,666). The Trust found itself with unpledged resources estimated at only Rs. 16,00,000 (£106,666). The Government of India came to its assistance with a cash grant of half a crore of rupees (£335,000), given out of a budget surplus, special legislation was carried through the Bombay Legislative Council in 1913 to increase the advantage of the Trust from Provincial and Municipal appropriations, and legislative measures were initiated to enable the Trust to raise money by special local taxation in Bombay. The cautious estimate of Rs. 16,00,000 also proved to have been below the mark. In the years following 1910, when the estimate was made, there was an improvement in the Trust's revenue, so that in 1913, after the amendment of the financial clauses of the Act and the grant of 50 lakhs by the Government of India, and in spite of important additions to the Trust's programme, the triennial financial forecast showed that the margin for expansion had increased to Rs. 95 lakhs. Inasmuch as the whole of this sum was required for completion of the Eastern Avenue, it was still necessary that the Trust should be provided with further funds for direct expenditure on improvement schemes. To this end a Bill was introduced into the Bombay Legislative Council on 16th December, 1913, providing for the levy of a surtax in stamp duty on conveyances of property in Bombay and for the payment of the nett proceeds to the Trust. The Municipal Corporation, however, protested against the raising of the necessary funds at the expense of the property owners of Bombay and suggested, as they and the Trust had already suggested in 1911, that an export duty on bales of cotton exported from Bombay should be levied instead. Government announced at the March, 1914, meeting of the Legislative Council that the Bill would be held over pending consideration of this suggestion. The matter has not yet proceeded further.

Meanwhile, the 1916 triennial financial forecast shows further important circumstantial improvement in the Trust's position, the result being to establish that after making full allowance for the worst probable effects of the war and full provision for all sanctioned schemes to the end of September, 1919, including the two Parel road schemes, which it had been supposed would exhaust the Trust's financial resources, the Trust have a margin of Rs. 122 lakhs for expansion of their programme. The main point for notice is that the new forecast shows the total loss on the 16 schemes included in the 1913 forecast as Rs. 309 lakhs against the corresponding figure of Rs. 352 lakhs estimated in 1913, an improvement of Rs. 43 lakhs, or 12 per cent., this improvement being for the most part made up of small items in several schemes:

"The salient features of the Trust's present sanctioned programme of 41 schemes may be summarised as follows:—Capital spent on acquisition and works gradually rises from 669 lakhs at end of 1916-17 to 969 lakhs at end of 1944-45. Debt gradually rises from 568 lakhs in 1916-17 to 788 lakhs in 1924-25. Annual interest and sinking fund charges thereon gradually rise from 25·79 lakhs in 1916-17 to 35·85 in 1925-26. From 1959-60 they gradually fall as loans are paid off till they vanish in 1984-85. Permanent ground rents gradually rise from 11·90 lakhs in 1916-17 to 30·33 lakhs in 1946-47. Nett annual revenue from estates rises from 22·41 lakhs in 1916-1917 to 31·33 lakhs in 1956-57. From 1998-99 onwards the nett revenue gradually falls as scheduled lands revest in Government and the Municipality till when in 2029-30 none such remains with the Trust it reaches 23·11 lakhs. Margin for expansion of programme, Rs. 122 lakhs."

The Trust, in November, 1915, carried a recommendation of their Improvements Committee to ask their solicitors to draft an amendment to the Improvement Trust Act which would give the Board powers, similar to those provided for in the English Act for the housing of the working classes, to acquire parts of houses, to remove obstructive houses, and to levy betterment contributions from houseowners who benefited by such Improvements, the aim of this amendment being to enable the Trust to deal with areas "represented" for improvement by the Municipal Corporation without the great expense of total demolition procedure. A draft from the solicitors is still under consideration by the Trust.

The following are some details of the Bill to amend the City of Bombay Improvement Act, which, as just mentioned, was passed by the Provincial Legislature in Jan. 1913. The main object of the Bill was to simplify the financial arrangements between the Government, the Municipality and the Trust and make them more favourable to both the local bodies. Under the old Act, as already mentioned, the annual municipal contribution to the Trust was an indefinite sum limited by a maximum of 2 per cent. on the municipal assessments of the year. Under the Amended Act the municipal contribution is a definite share of the year's general tax receipts, approximating to 2 per cent. on assessments and subject to no maximum, and the Trust keep their profits for their own

use. Under the original Act, the Trust had from 1909 onwards to pay to Government and the Municipality 3 per cent. per annum as interest on the schedule value of the Government and municipal lands vested in them, while Government and the Municipality were at liberty to resume any unleased, vested lands for public purposes without paying compensation, except in respect of capital spent by the Trust in improving them. Under the amended Act the Trust have no interest to pay, and Government and the Municipality must, on resuming vested lands, pay the Trust their full market value. There are other modifications of the old arrangements, similarly making for the financial benefit of the Trust. The new Act makes the Municipality the reversioners of the Trust's assets and liabilities. Apart from finance, the new Act contains important new sections under which the Trust are empowered to co-operate with employers of labour for the housing of the working classes by constructing chawls for their employés and leasing them to the employers at a rent calculated so as to yield to the Trust in the course of the 28 years of the lease the capital sum spent in the scheme, plus interest payable on the debentures by which the capital was raised, the chawls then becoming the property of the employers. The Trust are now corresponding with several millowners about schemes under these sections, and one set of chawls has been completed for the Spring Mills.

Plan of operations.

The work of the Trust, so far as it has gone or is planned, can be divided into two parts. The first concerned the immediate alleviation of the worst burdens of insanitation and the second consists of opening up new residential areas. The Trust began by attacking the most insanitary areas. Two broad roads, running due east and west, were cut through the worst parts of the city, sweeping away a mass of insanitary property and admitting the healthy westerly breezes to the most crowded parts of it. These thoroughfares are known as Sandhurst-road and Princess-street. They are now practically completed, and the greater parts of them are already settled under the new conditions, with sites on both sides of them disposed of on long leases and many new buildings built and occupied. Meanwhile, large areas of good building land, lying idle for want of development works, have been developed and brought on the market, sold at remunerative rates and largely built upon. Instances of this development are the Chaupati and Gamdevi estates, the land overhung by Malabar Hill, between it and the native city. These were cut up with fine new roads and are now nearly covered with modern suburban dwellings. Two of the most insanitary quarters in the midst of the city have been levelled to the ground and rebuilt in accordance with hygienic principles. Sanitary chawls have been built for about 20,000 persons. So much for the first phase of the Trust's labours.

The second phase, arising gradually out of the first and advancing along with its later stages, consists of the development of a new suburban area in the north of the island, beyond the present city, and the construction of great arterial thoroughfares traversing the island from north to south. The latter undertakings were originally known as the eastern and western avenue schemes, but the cost of land is rising so rapidly throughout the city, and the expense of new works is accordingly growing so heavy, that the western avenue has had practically to be abandoned and modified improvements of existing highways from south to north, on the western side of the city, substituted for it. The eastern avenue will run from the back of Crawford Market, the northernmost limit of the modern commercial city, directly north to the northern end of Suparibagh-road, near the western entrance road to old Government House, Parel, and have a width varying from 100 to 120 feet. It is divided into three sections. The first, starting from Crawford Market and reaching to Pydhonie, is already in the hands of the engineers for execution. The second, for which Parel-road requires widening, has been sanctioned by Government and the Improvement Trust are now acquiring the necessary properties for carrying it out.

Beyond the northern end of the Eastern Avenue, the north-east portion of the island, extending some three miles, consisted until recently of swampy rice lands, interspersed with bits of jungle and small hills and a few building areas. The Trust have acquired the whole area. A broad thoroughfare has been laid through the centre of it, with other roads connecting the outlying parts with the central road and with the railway stations. Some of the hills have been levelled and the material from them used to fill the low-lying parts of the estate. Development some time ago reached the stage of readiness for building in the half of the scheme nearest the city, and the Trust are now devoting their attention to facilitating private enterprise in this direction. Some building has already been commenced. The suburbs will probably become largely residential for people whose daily pursuits take them to the southern city, but its chief use will be for those whose avocations employ them in the large new port extension which the Port Trust are carrying out at the north of the present port and where the new cotton green and grain yards will be situated. The Port Trust have reclaimed 596 acres of land from the north of the harbour, at a cost of £1,833,333, and the whole of the export trade of the port will be concentrated in this new area and in that adjoining it, at Mazagaon and Sewri.

Statistics.

The following are some statistical details of the progress of the Trust's operations. By the end of 1916-17 the Board had raised Rs. 568 lakhs (face value, nett receipts being Rs. 560 lakhs) by loans and their total capital receipts including 50 lakhs received from the Government of India in 1911 and 4 lakhs from the Government of Bombay in 1913, amounted to Rs. 675 lakhs, out of which they had spent 42 lakhs on improvement of Government and Municipal lands temporarily vested in them, Rs. 621 lakhs on their own acquired estates and 3 lakhs on their office building. The following table, taken from the Trust's official report shows the extent of the development

operations carried out by the Trust up to the end of the official year 1916-17 :—

Developed Land.	Sq. yards in thousands
Permanently leased	1,019
Chawl sites	80
Yet to be permanently leased ..	258
Remainder roads, open spaces, etc.	535
Total ..	1,892

Rent of permanently-leased area	Rs 14·5 lakhs
Area of undeveloped land in thousands of square yards	5,172
Cost of acquisition ..	Rs. 556·9 lakhs

The disposal of plots on the Trust's newly developed estates is now progressing at a favourable rate. Practice shows that for obvious reasons the disposal of plots proceeds most slowly when an estate first becomes available for leasing to the public. When the first plots have been taken up and house building begins to assume definite proportions the remaining sites pass off without difficulty. Both in number and in value the plots disposed of during the year 1916-17 exceeded those disposed of in the two previous years together. The number was again a record and in point of value far exceeded that of any previous year. The total area fell below that of 1915-16 and 1913-14 but was well above the average. The plots in Gamdevi have all been based and a successful start has been made on the Dadar Matunga estate. This improved demand for the plots on the Trust's residential estates is a very satisfactory and encouraging feature. It seems to indicate that the public are at least beginning to appreciate the advantages of the Trust's method of laying out their estates with a prescribed margin of land to be kept permanently free of building on each plot, in such a way that each lessee gets the benefit of the open spaces in his neighbour's plot as well as those in his own.

By the beginning of 1916-17 completion certificates had been issued for 392 buildings on the Trust Estate, exclusive of Police chawls and Trust chawls. In 1916-17 certificates were granted for 34 new buildings.

The Working Classes.

The average total population in the Trust chawls and semi-permanent camps was 18,247 in 1916-17. The total rents of 4,732 rooms in the Trust chawls including the 341 rooms of the new Chinch Bunder chawls at the maximum rates works out to Rs. 2,51,023 per annum. The maximum for 1916-17 was Rs. 2,50,416 or 99·41 per cent. of the total recoverable Rs. 2,49,635 of the year plus previous arrears of Rs. 2,254. The difference between Rs. 2,51,023 and Rs. 2,49,635, *viz.*, Rs. 1,388 is due to vacancies. The percentage of outgoings to gross chawl revenue is found to be approximately 32·86% (against 34·97% in the preceding year) this proportion being higher than in the case of private chawls mainly because private owners spend far less than the Board on the sanitation of their chawls. On the basis of the maximum annual rent of Rs. 2,51,023 and outgoings at 32·86% the net annual income of permanent chawls works out to Rs. 1,68,537 or 396% on the cost of chawls (including value of land) amounting to Rs. 42,56,630 on which the Board pay annual interest and sinking fund charges at 4·61% amounting to Rs. 1,96,230 which is Rs. 27,693 more than the net annual income as worked out above. The average population of which was 14,912 during 1916-17.

The death rate in the Trust's permanent chawls has always been considerably below the general death rate in the vicinity. The smallest one room tenement on the Trust Estate is large enough for a family of five.

A New Method.

A further development of method in dealing with insanitary areas is now in prospect. It has already been recognised that estimates on the old wholesale demolition lines would be prohibitively expensive for the large "represented" areas remaining to be dealt with, owing to the constantly increasing cost of property and work, and could benefit only small areas surrounded by larger areas in which insanitary conditions are always going from bad to worse with the extension of building operations, under the lax Municipal by-laws already referred to. It is recognised that what is wanted is some general scheme of improvement that can be applied all over the city and some means of putting an immediate check to the spread of further insanitary evils through the weakness of the by-laws, especially in relation to the lighting and ventilation of one-roomed tenements. The Trust officers have devoted much time to studying this question and the chairman some time ago propounded a scheme by which all inadequately lighted and ventilated rooms in Bombay might be closed gradually and house-owners required, with some assistance from public funds, to reconstruct their houses, so that all rooms in them used for dwellings might have sufficient light and air. The scheme attracted the attention of Government, who appointed a representative committee to consider the new plan. This committee submitted a report generally approving the suggestions but the Corporation to whom the report was sent by Government for consideration have not yet come to any decision about it.

During the past two years there has been an important movement towards the establishment of co-partnership housing societies on the Board's Estate and the Board regard the new departure as one deserving every encouragement at their hands, especially in connection with the disposal of land in their Garden Suburb in the north of Bombay Island.

The Indian Ports.

The administration of the affairs of the larger ports (*Calcutta, Bombay, Madras, Karachi, Rangoon and Chittagong*) is vested by law in bodies specially constituted for the purpose. They have wide powers, but their proceedings are subject in a greater degree than those of municipal bodies to the control of Government. Except in Calcutta, the elected members are fewer in number than the nominated members. At all the ports the European members constitute the majority and the Board for Rangoon consists wholly of European members.

The income, expenditure and capital debt, according to the latest figures obtainable from the Department of Statistics (India) of the five principal ports managed by Trusts (Aden is excluded from the tables) are shown in the following table :—

—	Income.	Expenditure.	Capital Debt.
	£	£	£
Calcutta ..	1,062,364	993,800	7,169,953
Bombay ..	895,505	914,395	9,857,716
Karachi ..	236,409	256,680	1,741,463
Madras ..	177,896	192,577	812,032
Rangoon ..	302,512	265,665	1,990,800

In the Department of Statistics, India, the following returns have been compiled showing the ratios borne by the income and the expenditure of each port to the total income and the total expenditure, respectively, of all the chief Indian ports during the year 1915-16, the latest period for which the returns are obtainable :—

—	Income per cent.	Expenditure per cent.
Calcutta ..	39·3	37·4
Bombay ..	33·1	34·5
Madras ..	6·6	7·3
Karachi ..	8·7	9·7
Rangoon ..	11·2	10·0
Chittagong ..	1·1	1·2

The latest return of the Department of Statistics shows that in the ten years ending 1915-16, the income and expenditure of each port have increased as shown in the following table. The total income of all the ports has increased in the decade by 72·4 per cent. and the total expenditure by 82·4 per cent. :—

—	Increase per cent.	
	Income.	Expenditure.
Calcutta ..	59·2	50·7
Bombay ..	81·0	115·0
Madras ..	175·6	206·3
Karachi ..	21·5	55·8
Rangoon ..	123·2	98·8
Chittagong ..	140·3	254·6

The war has affected the trade of all the ports in a manner which makes it useless to continue comparisons up to date on the lines of the foregoing figures.

CALCUTTA.

The Commissioners for the Port of Calcutta are as follows :—

Appointed by Government.—The Hon'ble Mr. C. J. Stevenson Moore, C.V.O., I.C.S., Chairman, Mr. S. C. Williams, Offg. Vice-Chairman.

Elected by the Bengal Chamber of Commerce.—Mr. C. F. Beadel (Becker Gray & Co.); the Hon'ble Mr. J. Mackenzie (Macneill & Co.); the Hon'ble Sir Hugh Bray (Gillanders Arbuthnot & Co.); Mr. W. E. Crum (Messrs. Graham & Co.); Mr. A. Cameron (Mackinnon Mackenzie & Co.); Sir Francis H. Stewart, Kt., C.I.E. (Gladstone Wyllie & Co.).

Elected by the Calcutta Trades Association.—Mr. W. H. Phelps (William Health).

Elected by the Bengal National Chamber of Commerce.—Babu Ambica Charan Law.

Elected by the Municipal Corporation of Calcutta.—The Hon'ble Raja Reshee Case Law, C.I.E.

Nominated by Government.—Mr. A. M. Clark (Agent, Bengal Nagpur Railway); Sir Robert S. Highet, Kt. (Agent, East Indian Railway); Mr. E. A. S. Bell (Agent, E. B. Railway); Mr. A. H. Lloyd, I.C.S. (Collector of Customs) and Captain E. J. C. Hordern, R.I.M. (Captain Superintendent, Kidderpore Dockyard).

The principal officers of the Trust are—

Secretary.—Mr. J. McGlashan, M. INST. C.E., (Offg.)

Deputy Secretary.—Mr. T. H. Elderton (on leave).

Chief Accountant.—Mr. N. G. Park, C.A.

Chief Engineer.—Mr. J. Scott, M. INST. C.E.

Deputy Conservator.—Commander E. A. Constable, R.N.

Traffic Manager.—Mr. T. J. McCloughin.

Consulting Engineer and London Agent.—M. J. Angus, M. INST. C.E.

The Port Commissioners' income has expanded as follows during the last decade:—

Year	Income. Rs
1907–08	1,09,57,142
1908–09	1,20,16,630
1909–10	1,18,36,518
1910–11	1,28,26,171
1911–12	1,35,90,408
1912–13	1,42,46,317
1913–14	1,51,28,435
1914–15	1,44,50,349
1915–16	1,59,35,456
1916–17	1,57,23,432

The Port has been seriously affected by the war, as owing to the position of Calcutta, there has been practically no military traffic to be handled and the volume of imported goods and of coal exported has shrunk very largely owing to the shortage of tonnage, accentuated in respect of the imports by the restrictions imported on the export of certain articles, particularly iron and steel, from the United Kingdom. The following figures illustrate this:—

	1913-14. Tons.	1914-15. Tons.
Jetty imports	1,186,797	917,978
Docks Imports	613,876	700,133
Docks Exports General	1,231,589	920,659
Docks Exports Coal	3,017,180	2,633,805
	1915-16. Tons.	**1916-17. Tons.**
Jetty Imports	788,431	686,010
Docks Imports	570,997	444,210
Docks Exports General	1,054,985	1,185,159
Docks Exports Coal	1,610,645	1,789,482

In respect of income, there has been no corresponding shrinkage, the figures being as follows:—

	Rs.
1913–14	1,51,28,435
1914–15	1,44,50,349
1915–16	1,59,35,456
1916–17	1,57,23,432.

But the development which might otherwise have been expected has not occurred and the actual results have been attained only by the imposition of special war surcharges, which were brought into effect from the 1st February, 1915, in most cases, and in respect of coal from 1st April, 1916. The loss of vessels by submarine and the resort to the Cape route, occupying a much longer period, brought about a further shrinkage in trade during the early month of 1917 and the war surcharges above referred to have had to be increased with effect from 1st August 1917.

Various considerable improvements for the expansion of the port have in late years been carried out to provide for the growth of trade. An important project recently undertaken was one for the lighting of the lower reaches of the Hughli with a view to their navigation by night. Considerable progress has been made with a new scheme for the extension of the docks. A special committee was appointed in England in 1913, to visit and inspect British and Continental ports with a view to advising the Commissioner in the light of the latest experience there on various points connected with new works.

But these undertakings only belong to the outskirts of the main problem. The remedial measures of the Port Trust have proved beneficial, but they are insufficient to meet the ever-increasing requirements of trade. The question of the congestion at the Calcutta jetties and the absence of adequate transport facilities for the present volume of trade, has been engaging the attention of Government for some considerable time past. There has been a very great expansion of the trade of the port and a large increase in the number and tonnage of vessels entering it, and the lack of sufficient accommodation has resulted in serious delays to vessels and consequent loss, chiefly arising from the inadequacy of facilities for the discharge of cargo at the jetties.

The Government of Bengal, in December 1913, appointed a Committee to investigate the important questions represented by the problem of the future development of the port. The Committee consisted of the Hon. Sir William Duke, Chairman; Sir Henry Burt, the Hon. Mr. A. M. Monteath, the Hon. Mr. J. C. Shorreck, the Hon. Raja Hrishikesh Leka, Mr. A. G. Lyster, and Mr. H. F. Howard, members and Mr. R. N. Reid, I.C.S., Secretary. The Committee was empowered to—

(1) examine the existing traffic and port facilities in Calcutta and its immediate neighbourhood;

(2) investigate the present and future requirements of the trade of Calcutta, and

(3) determine the extent to which the various transport agencies shall provide new works and other facilities in order that these requirements may be fully met for as long a period as it is reasonable to prepare a forecast.

The Bengal Government, in an explanatory announcement, agreed "that the subject for consideration is one of wider range than an enquiry into the facilities afforded to the import trade at the jetties, and that it concerns rather the question whether proper facilities of all kinds are being provided to enable the port and railway authorities to deal promptly and adequately with the rapidly-expanding trade of Calcutta in accordance with a well-defined and carefully-thought-out policy. There are several projects for improving transport facilities and the railway and other approaches to the port, which have been prepared at various times and which are now under consideration, such as the provision of railway bridge over the Hughli at Panihati, the expansion of the docks, the provision of new coaling berths on the Howrah side of the Hughli, the Grand Trunk Canal Project, the removal of the Hatkhola jute mart and additions to the jetties. These projects are of the first importance and involve enormous expenditure and they should, it is rightly

held, be examined and co-ordinated by a committee whose duty it would be to make an exhaustive enquiry into the requirements of the trade of the port and the means by which these requirements could be met."

The Committee's report was published in March, 1914. It approved of the new scheme already undertaken by the Port Commissioners for the extension of the Docks, saying "we are of opinion that the general layout of the scheme is suitable, and that it will ensure an ample margin for the expansion of trade which is likely to take place in any period that can reasonably be foreseen." The Committee said that "the main criticism to which the conduct of the Port affairs is open is that the inception of these schemes was delayed until the great increase of trade during the last two years has showed only too conclusively how urgently they were required."

At the same time, the Committee recognised the eminent services rendered to the Port by the late Sir Frederick Dumayne, during his tenure of office as Vice-Chairman of the Port Commissioners, stating that the schemes of extension recommended were initiated under his auspices and that their inception is now possible is due to his foresight and to his grasp of the situation.

The Committee considered that the future expansion of the seaborne trade of Calcutta should take place in the neighbourhood of the docks. Their principal conclusions, in addition to their approval of the dock extension scheme, may be summarised as follows. A standing advisory Committee should be appointed in reference to the railway approaches and lay-out of the siding accommodation for the new dock system the Committee to consist of the traffic officers of the Port Trust and of the railways concerned. It would be unwise to incur a large outlay in developing the present jetties, but steps should be taken to mitigate the existing defects in regard to them without undue expenditure on schemes that will not be permanently useful. The whole question of the improvement of the river Hughli should be thoroughly investigated and decided on at an early date. The present site of the Howrah bridge should be adopted for the proposed new bridge, which should be wide enough to allow of three streams of traffic in each direction, in addition to the trams, and should carry greatly widened footways. The Improvement Trust should consider the whole question of road communication in connection with the prospective development scheme of the Port Commissioners. The opening of a second railway bridge over the Hughli will be required eight years hence. The Committee recommended various measures to enable the revenues of the Port Trust to meet the charges on the large capital works contemplated.

At the time of the outbreak of war, the Commissioners had in hand large development schemes which had been prepared as the outcome of the report of the Committee. But the execution of the schemes, so far as they were in hand in August 1914, has been seriously delayed and the commencement of the larger portions of them, including the construction of a new dock to be entitled King George's Dock, has been delayed both on account of the impossibility of obtaining materials and the financial restrictions laid down by the Government of India.

As regards the new Dock system, progress has been confined to the preparation of a complete scheme for the lock entrance, the details of which were prepared by the Commissioners' Chief Engineer, Mr. John Scott, and were then referred to a small Committee in London consisting of Sir John Wolfe Barry and Mr. Cartwright Reid, whose report on the proposals has been received and considered. The final plans are now being matured in general accordance with the recommendations of these Consultants.

The construction of a new opening bridge across the Hooghly has also been deferred on financial grounds, but the plans are being matured with a view to construction being undertaken as soon as possible.

BOMBAY.

The Board of Trustees of the Port of Bombay is constituted of 17 members, as follows:—

Appointed by Government.—Mr. G. W. Hatch, I. C. S. (*Chairman*), Mr. Mahomedbhoy Currimbhoy Ebrahim (Messrs. Currimbhoy Ebrahim & Co.), Col. H. A. L. Hepper, R.E. (Agent, G. I. P. Ry.), Mr. R. F. L. Whitty, I.C.S. (Collector of Customs, Bombay), the Hon'ble Mr. Purshotamdas Thakurdas (Messrs. Narandas, Rajaram & Co.), Mr. R. Woolcombe (Agent, B. B. C. I. Ry.), Mr. P. W. Monie, I.C.S. (Municipal Commissioner, Bombay), Brigdr-General W. C. Knight, C.B., C.S.I., D.S.O., A.D.C. (Military Officer serving with Bombay Brigade), the Hon. Mr. Phiroze C. Sethna (Sun Life Assurance Co., of Canada), Capt N. F. J. Wilson, C.M.G., R.I.M. (Director of the Royal Indian Marine.)

Elected by the Chamber of Commerce.—Mr. A. H. Froom (P. & O. S. N. Co.), the Hon'ble Mr. T. W. Birkett (Messrs. Killick, Nixon & Co.), Mr. Nigel F. Paton (Messrs. W. & A. Graham & Co.), Mr. J. S. Wardlaw Milne (Turner, Morrison & Co.) and the Hon. Mr. M. N. Hogg (Forbes, Forbes, Campbell & Co.)

Elected by the Native Piece Goods Merchant's Association.—Mr. Devidas Madhowji Thakersey (Messrs. Madhowji Thakersey & Co.).

Elected by the Millowners' Association.—Sir Vithaldas D. Thackersey, Kt. (Messrs. Thakersey Moolji & Co.).

The following are the principal officers of the Trust:—

Secretary.—Mr. H. E. Hart (on leave).

Chief Accountant (Acting Secretary).—Mr. J. Tyers.

Acting Chief Accountant.—Mr. W. R. Sharpe.

Engineers.—Messrs. P. G. Messent, C.I.E., M. Inst. C.E. (Chief Engineer), Mr. A. C. W. Fosbery, M. Inst. C. E. (Deputy Chief Engineer), L. H. Savile, A. M. Inst. C.E. (Deputy Chief Engineer, New Docks Works).

Port Officer.—Captain C. S. Hickman, D.S.O., R.I.M.

Docks Manager.—Major J. A. Cherry.

The revenue of the Trust in 1916-17 amounted to Rs. 1, 75,03,759. The expenditure amounted to Rs. 1 56,19,014 including a sum of Rs. 11 lakhs which the Trustees decided to set aside as provision for the heavy depreciation of Fund investments in Government and other public Securities brought about by the War. The net surplus on the year's working was Rs. 18,84,745. The excess of actual revenue collections over estimates was mainly due to enhanced Dock receipts owing to increased activity in the export trade of the Port. On capital account the expenditure during the year aggregated Rs. 36,62,106 of which Rs. 30,91,169 was spent upon new large Works Alexandra Wet Dock & Hughes Dry Dock and the Mazgaon Sewri extension reclamation, including the Port Trust Railway. The total debt of the Trust at the end of the year amounted to Rs. 15,30,65,747.

The trade of the Port of Bombay during the last official year aggregated 201¾ crores in value, an increase compared with the previous year of about Rs. 41¼ crores (exclusive of Government transactions) or approximately 30 per cent.

The number of steam and square rigged vessels which entered the docks or were berthed at the harbour walls and paid dues, excluding those which remained for unloading and loading in the harbour stream during recent years, including last year, is shown by the following statement :—

Year.	Number.	Tonnage.
1906–07	1476	2,690,406
1907–08	1477	2,678,345
1908–09	1474	2,633,303
1909–10	1611	2,747,779
1910–11	1589	2,866,623
1911–12	1519	2,767,913
1912–13	1566	2,926,506
1913–14	1579	3,135,597
1914–15	1880	4,417,035
1915–16	1794	3,939,721
1916–17	2112	5,031,572

Bombay Port Extension.

The Bombay Port Trust have partially completed important new development schemes, which will add greatly to the facilities of the port. Foremost amongst these works comes the Alexandra Dock, the equipment of which will have no superior in the world.

The starting point of the modern port of Bombay was the year 1862, when the Elphinstone Land and Press Company, which had already done useful development work, entered into a contract with Government to provide a hundred acres for the terminus of the Great Indian Peninsula Railway, receiving in return the right to reclaim from the sea for its own advantage two hundred and fifty acres fronting the properties it had already acquired. The Company brought its estate into bearing with rare enterprise.

Doubts were felt subsequently of the wisdom of conferring upon a private corporation such an enormous monopoly as the control of the harbour front. These were resolved in 1869 by the decision to buy out the company and vest its properties in a public trust. The estate passed into the possession of the Government in 1869, the purchase price being approximately two millions sterling, and after being managed by a department of Government in the interregnum, the property passed to the newly-constituted Port Trust in June, 1873.

Government purchased in 1879, on behalf of the Trust, the private foreshore owners' rights, at a cost of Rs. 75 lakhs, and at the same time reconstituted the Trust on a basis on which it has worked exceedingly well until the present day. The late King Emperor Edward VII, during his visit to Bombay in 1875, laid the foundation stone of the first large dock, which has since been known as Prince's Dock. This was opened in 1880, and thenceforward the financial difficulties hitherto experienced by the Port Trust disappeared. The construction of the Victoria Dock followed and recent years have provided an unbroken succession of surplus receipts into the treasury of the Port. Out of these profits charges on trade have been reduced wherever they pressed and the financial position of the Trust has greatly been strengthened by the building up of a large revenue, by the institution of sinking funds for the repayment of the whole of the existing debt and by liberal appropriations to depreciation accounts.

The trade of the port rapidly outgrew the accommodation provided at Prince's and Victoria Docks. The developments now in progress are the result and are estimated to provide for the requirements of the Port for another 20 years, or longer. The new schemes may be divided into four heads :

(*a*) The construction of the Alexandra Wet Dock and Hughes Dry Dock, of which His Majesty The King Emperor laid the foundation stone during his visit to Bombay as Prince of Wales in 1905. His Excellency the Viceroy, with Her Excellency Lady Hardinge, performed the opening ceremony in March, 1914.

(*b*) The reclamation for the development of Port facilities of 583 acres, with a wharf frontage 2½ miles in length—an addition of some 4½ per cent. to the area of the city—at Mazagaon and Sewri, beyond the present Docks at the extreme north of the harbour. The masonry walling round the reclamation and the filling behind the walls was entirely completed during 1915-16 and good progress has been made with surfacing this large area.

(*c*) The building of a new railway leading from the main lines of the G. I. P. and B. B. & C. I., outside the city, to the Docks, in order to provide for more expeditious handling of

heavy railborne traffic. Part of the new Port Trust Railway was opened for traffic on 1st January, 1915, and the main system was practically completed in the next year.

(*d*) The construction of a complete bulk oil installation at Sewri, at the north of the docks, with a deep-water pier.

The total estimated cost of the new dock and its equipment is Rs. 6,15,05,469 or, say, £4,100,365; cost of the Port Trust Railway over 123 lakhs (£820,000); of the bulk oil installation, 22¼ lakhs (£147,500); and of the reclamation and contingent works, Rs. 388 lakhs, or, say, £2,586,666.

The dock is oblong in shape, with two bays at the north end. The total area of the wet basin is 49·52 acres, the length of quays, including the harbour wall, nearly three miles. There are 17 berths 500 ft. in length. These berths are equipped with hydraulic cranes and transit shed accommodation varying from 3-storeyed sheds 400 ft. long by 120 ft. wide, to single storeyed sheds 400 ft. long by 100 ft. wide. Railway sidings run between the quays and the sheds, also behind the sheds. On the harbour wall there is a quay 3,000 ft. long, equipped with hydraulic cranes and transit sheds. The north end of this quay is intended for a trooping berth. Hydraulic power is used for working the cranes, dock gates, machinery, transit shed lifts, capstans, etc. The dock entrance is through a lock on the south-west, parallel to which runs the new dry dock, a thousand feet long, a hundred feet wide, and with a sill thirty-three and a quarter feet below high water ordinary neap tides.

Outside the dock, beyond the entrance lock, runs the new mole, a continuation of the south-west wall, alongside which ocean steamers may embark and disembark their passengers direct from the shore, thus dispensing with the tiresome interposition of the tender. In the immediate vicinity of the landing pier, a Customs house, refreshment and waiting rooms, post and telegraph offices and every facility the traveller can require are under construction. A reclamation of 9 acres incidental to the new dock works has been opened between the Dock and Ballard Pier. Sites thereon are to be let on 99-year lease, for "Offices and 1st class residences and, on certain conditions," large shops and hotels.

The small Carnac basin, immediately north of the new dock and formerly used by country craft, has been filled in, so as to enable a canal to be cut from the northern extremity of Alexandra Dock, and extending to Victoria Dock. The width of the canal will be 80 ft. Four berths will be provided to permit ships to lie at the wharves on either bank. The waterway will enable ships to be taken into any part of the Bombay dock area through the Alexandra Dock entrance. This will probably lead to the closing of the old dock entrances, with the result that ships will be saved much intricate handling and the Port Trust will be relieved of the necessity of expensive dredging operations.

The railway sidings and series of transit sheds in the new dock were planned according to the most modern principles of dock management.

The Sewri reclamation will chiefly be utilised for the accommodation of the export trade of cotton, grain and seeds, which form the largest item in the traffic of the port. The old cotton green—or market—is situated at Colaba, at the extreme southern end of the port and has long been greatly overcrowded, besides encumbering that end of the port. The new cotton green and godowns on the reclamation will cover about 166 acres, with 182½ acres available for future extension. The present greens and godowns at Colaba occupy 50 acres. Unloading sidings with accommodation for 700 wagons are to be provided, in addition to ample running lines, as compared with sidings to hold 154 wagons at Colaba at present.

KARACHI.

The members of the Board of Trustees of the Port of Karachi are as follows:—

Chairman—Mr. H. C. Mules, C.S.I., M.V.O.

Appointed by Government.—The Hon'ble Mr. W. U. Nicholas (Vice-Chairman), (Anderson & Co.), Mr. F. S. Punnett (Chief Collector of Customs in Sind), Mr. D. B. Trevor (District Traffic Superintendent, Karachi Port, North-Western Railway), Major A. B. Merriman (General Staff Officer, Karachi Brigade), Mr. T. J. Stephen (The National Bank of India, Ltd.), Mr. Gidumal Lekhraj (representative Indian Merchant).

Elected by the Chamber of Commerce.—Mr. E. A. Pearson (Forbes, Forbes, Campbell & Co., Ltd.), Mr. P. H. Browne (Mackinnon, Mackenzie & Co.), on leave, Mr. J. I. Murray (acting), (Ewart Ryrie & Co.), Mr. S. C. Woodward Clement, Robson & Co.).

Elected by the Municipality.—The Hon'ble Mr. Harchandrai Vishindas, B.A. LL.B. (President, Karachi Municipality).

The principal officers of the Trust are:—

Port Officer.—Commander M. W. Farewell, C.I.E., R.I.M.

Secretary—(vacant) Mr. T. S. Downie (acting).

Chief Engineer.—Mr. W. H. Neilson, B.A., B.A.I., B.SC., M.I.C.E.

Superintendent, Export and Import.—Mr. T. S. Downie (on deputation), Mr. A. A. L. Flynn (acting).

The revenue receipts and expenditure of Karachi Port for the year 1915-16 whereas under—

Revenue receipts (excluding expenditure from Port Fund Account), Rs. 32,70,323; Expenditure, Rs. 37,45,616; Deficit, Rs. 4,75,293 (met from opening balance); Reserve Fund, forty lakhs (face value).

The revenue receipts in 1914-15 were Rs. 33,49,714. The capital debt of the port, at the close of the last financial year, amounted to Rs. 2,61,21,949.

The number of vessels entering the port in the year 1915-16 was 3,740 with a tonnage of 1,957,467½ tons against 3,076 with a tonnage of 1,933,154½ tons in 1914-15. This is exclusive of vessels put back and fishing boats. The number of steamers which entered the port was 912 against 852 in the previous year. The tonnage of steamers entering the port was 1,811,383 compared with 1,823,937 in the previous year.

Imports landed during the year amounted to 330,979 tons against 697,958 in the previous year. Total shipments were 1,296,268 tons in 1915-16 against 1,015,863 tons in 1914-15.

The close of the year 1912-13 marked the practical completion of harbour and port development works, the result of which will be a new departure in the history of the Trust. But the original scheme continued to pass through a process of expansion and these extensions of the works were practically finished by the end of 1915-16. On the last day of the year Mr. G. R. Lynn, M.I.C.E., resigned his post as Chief Engineer to the Port Trust, at the age of 66 years.

Plans and estimates were in 1915 submitted to and approved by Government for a West Wharfage Scheme to provide 16 new berths, the cost being estimated at Rs. 5,43,77,990, though the Trust anticipate that these estimates "will have to be thoroughly revised." Some Rs. 17 lakhs were spent on the scheme up to the end of 1915, and for the present it is proposed to carry out a portion of the scheme only, *viz.*, for 6 berths, at an estimated cost of over Rs 1,48,00,000. Much dredging and the construction of a protecting bank as the sea face of the new wharf and of a clay bund along the west side of the area to be reclaimed were completed last year. Government also sanctioned in 1915 plans and estimates for a Lower Harbour Improvement Scheme, costing Rs. 25,25,000, which is a corollary to the other improvements. Under this scheme, the entrance channel will be deepened to a depth of 32 ft. 6 in. at L. W. O. S. T. This will enable any ship that can pass through the Suez Canal to enter the harbour and take up a berth at the lowest state of the tide. The sanctioned draught for the Suez Canal is now 29 feet, but 32 feet are being worked up to and it is understood that this will not be the extreme limit. Nothing was done in connection with this scheme last year, nor does there appear any likelihood of a commencement with it for some time.

MADRAS.

The following gentlemen are the Trustees of the Port of Madras:—

Officials.—The Hon'ble Sir Francis J. E. Spring, K.C.I.E. (Chairman), Mr. C. P. Eccles, B.A., I.C.S. (Collector of Customs), Captain C.B. Henley, R.I.M. (Presidency Port Officer), and Mr. J. M. Lacey, A.M.I.C.E. (Superintending Engineer, V Circle, Madras).

Non-Officials.—(1) *Nominated by Government.*—Mr. A. Muirhead, C.I.E., Mr. R. Todd, M. R. Ry. Rao Bahadur P. Thyagaraya Chetti Garu, B.A., M. R. Ry. C. Gopal Menon Avergal. (2) *Representing Chamber of Commerce, Madras.*—The Hon'ble Mr. Gordon Fraser, Sir Hugh S. Fraser, Kt., Mr. A. P. Symonds, Mr. H. P. M. Rae, (3) *Representing Southern India Chamber of Commerce, Madras.*—Khan Bahadur Muhammad Abdul Kuddus Badsha Sahib and M. R. Ry. Rao Sahib C. Ramanujam Chetti Garu, (4) *Representing Madras Trades Association.*—Mr. R. J. C. Robertson.

The receipts of the Trust from all sources were Rs. 13,13,310 against Rs. 11,66,697 in 1915-16. This represents an increase of 12·56 per cent. But Rs. 1,14,998 of the receipts were ascribable to the 25 per cent. superdues on exports and imports. The gross expenditure out of revenue—not counting contributions made by revenue to capital or repayment of debt—was Rs. 11,92,825 or the equivalent of 90·82 per cent. of the gross receipts. Excluding from working expenses the interest on loans, which in the year under review came to Rs. 4,92,151 actual working expenses came to 53·35 per cent. of actual harbour earnings against 50·81 per cent. in 1915-16. The increased percentage is attributable to heavy payments made for claims, due to the adverse judgment in the 'cotton case' and to law charges. The average cost per ton of goods passed through the port by the Trust's own agency was Rs. 3.18 or, if the whole of the goods passing through be counted, including that not handled by the Trust, the average cost was Rs. 1·95 per ton. The harbour dues alone, *i.e.*, excluding the charges for specific services such as cranage and storage, came to Rs. 8,22,787. The average charges paid by shipping came to about 1·82 annas per net registered ton.

The Port Trust's most important scheme, now almost completed, consists of the quaying of the whole of the western face of the harbour by sinking wells to a depth of 50 to 60 feet below low water so that ships may lie alongside and work their cargo direct with the shore. The whole length of this work, full 3,000 feet, is almost ready. The West Quay provides berthing for four, or in an emergency, *e.g.*, during a mobilisation, for six vessels of 24 to 28 feet draft. Back of the four berths are four transit sheds of an area of about 7 acres. Between and outside of the ship berths, spaces,

equipped with 30 one-ton hydraulic cranes, have been reserved for working cargo in and out of lighters. Large portal cranes are under supply for working cargo direct in and of out the holds of ships lying at the quay. Before the construction of this West Quay the 200-acre harbour enclosure afforded about half its area, with a depth of 26 to 32 feet, while the other half shallowed off to the western shore as shelving strand. Now the whole of the area is available for steamers of Suez Canal drafts.

Besides the four berths available for ships to lie at the West Quay, there have, for the last few years, been available three other ship-quays, namely, the Outer Quay, used chiefly for the discharge of case oil and petrol on the north-eastern sheltering breakwater; the East Quay, used for coal, at the old harbour entrance, now closed; and the South Quay, used chiefly by the Rangoon and Singapore passenger vessels, as well as by horse and cattle boats. All these three quays are connected up by rail with all parts of the harbour. But the Outer Quay is not now in use owing to the work that is in progress to repair damage done by a cyclone.

The Port of Madras has always been very defective in accommodation for cargo awaiting the arrival of vessels for export. For this purpose many old and inconvenient godowns in the town have long been in use as well as certain sheds made available for the purpose by the Railways. But now the Port Trust has entered on a policy of constructing warehouses for lease to merchants wherein produce intended for export and, to some extent also, if desired, the same merchants imports, may be stored at a fixed rate per unit of area. Two of such warehouses have already been completed and the whole of them are being leased. Part of the steel work for the third has arrived, but the balance is held up owing to war conditions. It is believed that the provision of this class of accommodation will have a very beneficial effect on the development of the export trade of Madras, and particularly on that of the ground-nut trade. The warehouses when complete will have a total floor area of about 5½ acres in which exports can be graded, bagged and marked in preparation for shipment. Moreover the flat roofs are available for drying and grading purposes.

Madras port was, on the night of November, 22-23, 1916, attacked by a violent cyclone. The centre of the wind storm passed inland, perhaps 100 miles south of the port; but the heavy seas resulting from the cyclonic winds—which though violent in the path of the storm were of comparatively low magnitude at Madras—undermined and overturned the 5,000-ton monolithic bastion block, forming the end of the outer sheltering breakwater and supporting a small lighthouse.

Thereupon, deprived of its head, the structure of the breakwater was unable to stand up against the violence of the waves though composed of 20 to 33-ton concrete blocks with a 5-foot capping of solid concrete, and about 130 feet of it was destroyed and lies under water, while another 100 feet of it—out of the whole length of 1,500 feet—is badly shaken. The restoration of the damage and the formation of a new and impregnable bastion will probably cost not less than Rs. 15 lakhs, and the work will probably occupy fully three years.

The Port Trust's debt at the end of the official year was Rs. 1,30,80,055.

RANGOON.

The personnel of the Commissioners for the port of Rangoon is comprised of the following thirteen members:—

Appointed by Government.—Sir George C. Buchanan, K.C.I.E., M. INST., C.E., (Chairman on deputation), Mr. J. Ll. Holmes, M. INST. C.E., (Chairman, sub. *pro tem.*), Mr. J. A. Stevens, (Chief Collector of Customs, Burma), Mr. E. C. S. Shuttleworth (Offg. Commissioner of Police, Rangoon), Commander S.D. Vale, R.I.M. (Principal Port Officer, Burma), Mr. G. Scott., M.A., I.C.S. (President Rangoon Municipality), the Hon'ble Mr. W. Macdonald, Mr. J. W. A. Bell and Mr. H. B. Huddleston (Vice-Chairman).

Elected by the Burma Chamber of Commerce.—Messrs. J. A. Polson, D. Robertson, W. Buchanan and J. A. Swan.

Elected by the Rangoon Trades Association.—Mr. F. Watson.

Officers of the Trust are—

Secretary.—Mr. I. Cowling (on leave); Mr. H. Leonard (officiating).

Resident Engineer.—Mr. W. Lindley, sub. *pro tem.*

Executive Engineer (River Conservancy).—Mr. E. C. Niven, A.M. INST. C.E. (on leave); Mr. W. Lindley (officiating).

Deputy Conservator.—Mr. H. G. G. Ashton (on leave); Mr. G. Cardno (officiating).

Traffic Manager.—Mr. E. H. Keeling (on leave); Mr. J. H. Primrose Wells (officiating).

Chief Accountant.—Mr. D. H. James.

Port Health Department.—Dr. F. A. Foy M.B., C.M., D.P.H., Port Health Officer.

Port Police Department.—Mr. T. Austin, Superintendent.

The receipts and expenditure on revenue account of the port of Rangoon in 1916-17 were as follows:—

	Rs.	a.	p.
Receipts	45,12,688	4	3
Expenditure	41,99,116	4	11

The capital debt of the port fund at the end of the year was Rs. 2,98,62,000. Securities (at cost) of Rs. 51,88,816 are held at the credit of the sinking fund.

The total value of the port during the year was Rs. 4,438·34 lakhs, as compared with Rs. 4,689·96 lakhs in the preceding year.

The total imports (landed or sent inland in river craft) from sea-going vessels amounted to 956,289 tons. Goods landed from vessels

arriving from European ports and other ports outside Asia declined by 26 per cent., and from Asiatic ports by 8 per cent. The traffic at the jetties for inland vessels totalled 1,246,456 tons. The total number of steamers (excluding Government vessels) entering the port was 996 with a total net registered tonnage of 2,064,091, being 95 steamers and 109,448 tons below the previous year.

There took place on the 17th February, 1914, the inauguration of the recently completed river training works, rendered necessary by the erosion of the right bank of the Rangoon river above the town to such extent as to threaten the permanent diversion of the main stream from the Rangoon foreshore and the consequent formation of a sandbank in front of the whole of the port frontage. The works comprised a training wall 10,000 ft. long and the dredging of a channel through the shoal in front of the wall. It is calculated that 99½ per cent. of the river is brought under control. One and a half million tons of granite were used in the work. The wall was practically completed one year and nine months before the estimated time. The object of the work has successfully been accomplished, the main channel of the river has been diverted into its new course and the erosion of the right bank has ceased. The revised estimate for the complete work is Rs. 138 lakhs, against the sanctioned estimate of Rs. 150 lakhs. The cost is borne by a free grant of Rs. 50 lakhs from the Government of India and by the raising of port debenture loans. The work being non-revenue-producing, imposes a burden of some Rs. 5½ lakhs on the trade of the port.

Sir George Buchanan, in December 1915, proceeded to Basra, to advise the Government of India as to improvements at the mouth of the Shatt-el-Arab and elsewhere in that region. He is still engaged there.

CHITTAGONG.

Chittagong, in Eastern Bengal, on the right bank of the Karnaphuli river 12 miles from its mouth, was already an important place of trade in the sixteenth century, when the Portuguese merchants gave it the name of Porto Grando. The construction of the Assam Bengal Railway has made it the natural outlet for the trade of Assam and part of Eastern Bengal. The chief business is the export of jute, which is baled at Narayanganj and either shipped thence by steamer to Chandpur and railed to Chittagong or dispatched direct in brigs to that port. Piecegoods, salt and kerosene oil are imported, and rice, tea and hides are the principal exports. The total value of the exports in 1913-14 was £3,232,463 and the total value of the imports in the same year was £928,591.

It has been recommended that this port may be made over to the Assam-Bengal Railway and that funds required for its improvement should be provided by the Government of India out of their railway budgets. This proposal has the support of the Bengal Government and a report on the matter has been submitted to the Secretary of State. The Acting Agent of the Assam-Bengal Railway points out in this report that, however valuable the Port of Chittagong might be to the Assam-Bengal Railway it should only be after the most careful consideration that the sum of over a crore of rupees already spent upon this port should be added to the Assam-Bengal Railway capital, since to do so would mean the further putting back of the prospect of this railway's paying dividends. He urges therefore, that the Government of India should take upon itself the whole of the responsibility for the expenditure required, which, he thinks might rightly be done in view of the increasing value to Government to be derived from improving the port. The procedure, he suggests, is that the capital of the Port, together with the capital cost of the railway terminal facilities should be included in a separate account and not in that of the Assam-Bengal Railway and that this should be financed in the same way as are branch line companies.

The chief business is the export of tea, piece goods, salt and kerosine oil are imported, and tea and jute are the principal exports—

FOREIGN TRADE, 1916-17.

Imports	304,440
Exports	2,525,190

COASTING TRADE, 1916-17.

Imports	2,065,530
Exports	422,307

VIZAGAPATAM HARBOUR PROJECT.

The question of the creation of a harbour at Vizagapatam, to supply an outlet for a large area of fertile country hitherto undeveloped and without suitable access to the outside world, has been lately brought to the fore through a report to the Bengal-Nagpur Railway Company by their consulting engineers, Sir John Wolfe Barry, Lyster and partners. This report, which was based on personal inspection, upholds the practicability of creating, at no very extravagant cost, an inland harbour to which access would be maintained by two breakwaters projecting into the sea, and by dredging a channel to the depth (in the first instance) of 24 feet. A deep-water quay would be provided, 1,500 feet in length, with a possibility of supplying further accommodation in the future. The proposals made in this report have been carefully gone into at site by representation both of the consulting Engineer and the Bengal Nagpur Railway, and working plans are now being prepared so that there may be no delay in starting work when funds are available for the purpose. It is understood that the question is meeting with sympathetic consideration on the part of the Indian Government and that the Bengal-Nagpur Railway will probably be given powers to raise capital for the construction and working

of the port as part of their railway system. That the creation of such a port would have, a beneficial influence on the development of a large area in East Central India seems unquestioned. It is pointed out that Vizagapatam, lying as it does in front of the only practicable gap in the barrier of the Eastern Ghats, is formed by nature to be the outlet of the Central Provinces, from which a considerable amount of trade has taken this route in the past, even with the imperfect communications hitherto available. A necessary complement of the scheme would be the construction of the proposed railway by Parvatipuram to Raipur, which with the existing coast line of the Bengal Nagpur Railway, would make a large and rich area tributary to the proposed port, and obviate the long and expensive circuit by Calcutta. A link would also be supplied in the most direct route to Rangoon from Europe by way of Bombay, while from an imperial point of view the possible provision of a fortified port on the long and almost unprotected stretch of coast between Colombo and Calcutta is held to be a consideration of great importance. The lofty projecting headland of the Dolphin's Nose would, it is pointed out, offer facilities for this purpose as well as protecting, the entrance to the Port from the effects of south and south-westerly gates.

STOCK EXCHANGES.

There are about 365 Share and Stock Brokers in **Bombay**. They carry on business in the Brokers' Hall, bought in 1899 from the funds of the **Share and Stock Brokers' Association** formed to facilitate the negotiations and the sale and purchase of Joint Stock securities promoted throughout the Presidency of Bombay. Their powers are defined by rules and regulations framed by the Board of Directors and approved by the general body of Brokers. The Board has the power to fix the rates in times of emergencies. It is composed of Sir Shapurji Broacha (Chairman), Mr. Parbhudas Jivandas (Vice-Chairman), Mr. Maneckjee Pestonji Bharucha, Mr. Shapurjee Sorabjee Mahimvala, Mr. Nasserwanji Pherozesha Karani, Mr. Nagji Motichand, Mr. Hirachand Vasanji, Mr. Bhaidas Goculdas, Mr. Vadilal Punamchand and Mr. Jamnadas Morarji (Secretary).

At first the admittance fee for a broker was Rs. 5 which was gradually raised to Rs. 1,000. The fee for the Broker's card has increased and it was recently sold at Rs. 6,000. The rules of the Association were revised in October 1916 and from the New Year the purchaser of shares has to pay the stamp and transfer fee instead of the seller. There are two classes of Exchange Brokers, Europeans and Indians, the latter being certified for recognition by the native Stock Exchange. Business in Government Paper and all other Trustees' Authorised Securities is carried on under the rules of the Bombay Stock Exchange, but in the street outside the hall.

In November 1917 a second Stock Exchange was opened in Bombay, with its headquarters in Apollo Street.

For many years the **Calcutta** Share Market had its meeting place in various gullies in the business quarter and was under no control except that of *established market custom*. In 1908 the **Calcutta Stock Exchange Association** was formed, a building was leased in New China Bazar Street now called Royal Exchange Place, a representative committee was formed, and the existing trade customs were focussed into rules drawn up for the conduct of business. Admittance as a member of the Stock Exchange is by vote of the committee, and the entrance fee is at present Rs. 500. The market custom differs very materially from that of most other Stock Exchanges since there are *no settlement days, delivery* is due the second day after the contract is passed and sales of securities are effected for the most part under blank transfers. Another difference in procedure as compared with the London Stock Exchange is that there are no "Jobbers" in the Calcutta market. The Dealers who take their place, more or less, are not compelled to quote a buyer's and a seller's rate and are themselves Brokers as well as dealers, calling upon the Banks and other clients and competing with Brokers.

There are about 150 members, besides outside brokers, the former consisting of European, Jewish, Marwari, and Bengalee firms. The Marwaris predominate. The volume of *bona fide* Investment business is comparatively small and insufficient for the number of Brokers. The principal business transacted on the Calcutta Stock Exchange is connected with the shares in Jute Mills. Coal Companies, Tea Companies registered in India, Miscellaneous Industrial concerns (such as Paper, Flour, Sugar), Railway and Transit Companies and Debentures, the latter comprising those of Industrial concerns and Trustee's Investment Securities, namely, Municipal and Port Trust Debentures. When speculative operations are being actively engaged in, which frequently take the form of forward contracts for delivery in three months' time, the value of securities changing hands may aggregate as much as a crore of Rupees per month, but since the trade is not constant and one year differs very much from another, it would be difficult to estimate what the average annual turn over would amount to. The association has an honorary secretary and is not at present affiliated to the Bengal Chamber of Commerce.

Famine.

Famine in India is the inevitable accompaniment of economic conditions which leave the bulk of the people dependent on the soil for their means of livelihood. It is intensified, because the produce of the soil over the greater part of India is independent on a short rainy season, and the rains are erratic and subject to violent fluctuations. It falls with exceptional severity on India because the soil is divided into a multitude of petty holdings, tilled by people without any capital, living for the most part from hand to mouth, and amongst whom credit ceases to exist as soon as the rains fail. In other agricultural countries there are good seasons and bad; but there is none other, with the possible exception of China, where in a famine year millions of acres may not yield so much as a blade of grass, except under artificial irrigation. The conclusion to be drawn from these conditions is that for many years to come India must be susceptible to famine. The shock of famine may be mitigated by the spread of railways, by the development of irrigation, the growth of manufacturing industry and the improvement of rural credit. There is evidence that all these forces are tending greatly to reduce the social and economic disturbance caused by a failure of the rains. But they cannot entirely remove it.

Famine Under Native Rule.

At one time there was a general tendency to attribute famine in India entirely to the effect of British rule. In the golden age of India, we were told—whenever it may have been—famine was unknown. But India had been drained of its resources of food by the railways, the people had been impoverished by the land revenue demand and the country as a whole had been rendered less capable of meeting a failure of rains by the "Drain" caused by the Home Charges (*qv*). These fallacies have disappeared under the inexorable logic of facts. A better knowledge of Indian history has shown that famines were frequent under Native rule, and frightful when they came. "In 1680" says Sir William Hunter, in the History of British India, "a calamity fell upon Gujarat which enables us to realise the terrible meaning of the word famine in India under Native rule. Whole cities and districts were left bare of inhabitants." In 1631 a Dutch merchant reported that only eleven of the 200 families at Swally survived. He found the road thence to Surat covered with bodies decaying on the highway where they died, there being none to bury them. In Surat, that great and crowded city, he could hardly see any living persons; but "the corpses at the corner of the streets lie twenty together, nobody burying them. Thirty thousand had perished in the town alone. Pestilence followed famine." Further historical evidence was adduced by Sir Theodore Morrison in his volume on the Economic Transition of India. The "Drain" theory has been exploded. It has come to be seen that whilst railways have checked the old-fashioned practice of storing grain in the villages they have made the reserves, where they exist, available for the whole of India. In India there is now no such a thing as a food famine; the country always produces enough food for the whole of the population; famine when it comes is a money famine and the task of the State is confined to providing the means for those affected by drought to earn enough to buy food. The machinery whereby this is done will be examined after we have seen the experiences through which it was evolved.

History of Recent Famines.

The Orissa famine of 1865-67 may be taken as the starting point because that induced to first great and organised effort to combat distress through State agency. It affected 180,000 square miles and 47,500,000 people. The Bengal Government was a little slow in appreciating the need for action, but later food was poured into the district in prodigious quantities. Thirty-five million units were relieved (a unit is one person supported for one day) at a cost 95 lakhs. The mortality was very heavy, and it is estimated that a million people, or one-third of the population, died in Orissa alone. This was followed by the Madras famine of 1866, and the famine in Western India of 1868-70. The latter famine introduced India to the great migration from Marwar which was such a distinguishing feature of the famine of 1899-1900; it is estimated that out of a total population of a million and a half in Marwar, one million emigrated. There was famine in Behar in 1873-74, then came the great South Indian Famine of 1876-78. This affected Madras, Mysore, Hyderabad and Bombay for two years and in the second year extended to parts of the Central and United Provinces and to a small tract in the Punjab. The total area affected was 257,000 square miles and the population 58,500,000. Warned by the excessive expenditure in Behar and actuated by the desire to secure economy the Government relief programme was not entirely successful. The excess mortality in this famine is said to have been 5,250,000 in British territory alone. Throughout British India 700,000,000 units were relieved at a cost of Rs. 8½ crores. Charitable contributions from Great Britain and the Colonies aggregated Rs. 84 lakhs.

The Famine Codes.

The experiences of this famine showed the necessity of placing relief on an organised basis. The first great Famine Commission which sat under the presidency of Sir Richard Starchey, elaborated the Famine Codes, which amended to meet later experience, form the basis of the famine relief system to-day. They recommended (1) that employment should be given on the relief works to the able-bodied, at a wage sufficient for support, on the condition of performing a suitable task; and (2) that gratuitous relief should be given in their villages or in poor houses to those who are unable to work. They recommended that the food supply should be left to private agency; except where that was unequal to the demands upon it. They advised that the land-owning classes should be assisted by loans, and by general suspensions of revenue in proportion to the crop failure. In sending a

Famine Code to the provincial governments, the Government of India laid down as the cardinal feature of their policy that the famine wage "is the lowest amount sufficient to maintain health under given circumstances. Whilst the duty of Government is to save life, it is not bound to maintain the labouring population at its normal level of comfort." Provincial codes were drawn up, and were tested by the famine of 1896-97. In that 307,000 square miles were affected, with a population of 69,500,000. The numbers relieved exceeded 4,000,000 at the time of greatest distress. The cost of famine relief was Rs. 7¼ crores, revenue was remitted to the extent of Rs. 1¼ crore, and loans given aggregating Rs. 1½ crore. The charitable relief fund amounted to about Rs. 1½ crore, of which Rs. 1¼ crore was subscribed in the United Kingdom. The actual famine mortality in British India was estimated at 750,000. The experiences of this famine were examined by a Commission under Sir James Lyall, which reported that the success attained in saving life and the relief of distress was greater than had ever been recorded in famines, comparable with it in severity, and that the expense was moderate. But before the Local Governments had been given time to digest the proposals of this Commission or the people to recover from the shock, the great famine of 1899-1900 supervened.

The Famine of 1899-1900.

This famine affected 475,000 square miles with a population of 59,500,000. In the Central Provinces, Berar, Bombay, Ajmer, and the Hissar district of the Punjab famine was acute: it was intense in Rajputana, Baroda, Central India, Hyderabad and Kathiawar. It was marked by several distinctive features. The rainfall over the whole of India was in extreme defect, being eleven inches below the mean. In several localities there was practically no rain. There was in consequence a great fodder famine, with a terrible mortality amongst the cattle. The water supply was deficient, and brought a crop of difficulties in its train. Then districts like Gujarat, where famine had been unknown for so many years that the locality was thought to be famine immune, were affected; the people here being softened by prosperity, clung to their villages, in the hope of saving their cattle, and came within the scope of the relief works when it was too late to save life. A very large area in the Native States was affected, and the Marwaris swept from their impoverished land right through Central India like a horde of locusts, leaving desolation in their train. For these reasons relief had to be given on an unprecedented scale. At the end of July 4,500,000 persons were supported by the State, Rs. 10 crores were spent on relief, and the total cost was estimated at Rs. 15 crores. The famine was also marked by a widespread acceptance by Native States of the duty hitherto shouldered by the Government of India alone—the supreme responsibility of saving human life. Aided by loans to the extent of Rs. 3½ crores, the Native States did a great deal to bring their administration into line with that in British India. Although actual deaths from starvation were insignificant, the extensive outbreaks of cholera, and the devastating epidemic of malaria which followed the advent of the rains; induced a famine mortality of approximately a million. The experiences of this famine were collated by the Commission presided over by Sir Antony MacDonnell. This Commission reported that taking the famine period as a whole the relief given was excessive, and laid down certain modified lines. The cardinal feature of their policy was moral strategy. Pointing out that if the people were assisted at the start they would help themselves, whilst if their condition were allowed to deteriorate it proceeded on a declining scale, they placed in the forefront of their programme the necessity of "putting heart into the people." The machinery suggested for this purpose was the prompt and liberal distribution of tagai loans, the early suspension of revenue, and a policy of prudent boldness, starting from the preparation of a large and expansive plan of relief and secured by liberal preparations, constant vigilance, and a full enlistment of non-official help. The wage scale was revised; the minimum wage was abolished in the case of able-bodied workers; payments by results were recommended; and proposals were made for saving cattle.

Success of the new policy.

The effectiveness of this machinery was partly demonstrated during the three lean years which followed the great famine in the Bombay Presidency. But it received its most conspicuous demonstration when the rains failed in the United Provinces in 1907-08. Moral strategy was practised here on an unprecedented scale, tagai loans being granted with the greatest liberality. The effect of these measures was succinctly indicated by the Lieutenant-Governor of the United Provinces, Sir John Hewett, in a speech in summarising his administration prior to his departure in England in March 1912. He showed that in the autumn harvest of 1907 there was a shortage of 4 million tons of food grains and in the spring harvest a shortage of 3 million tons, giving a total of seven million tons, or the food supplies for the Province for nine months and an economic loss of £38 million pounds. The Government advanced £1½ million to cultivators for temporary purposes and large sums for wells and permanent irrigation. The whole of this sum was repaid except fifty-four thousand pounds remitted owing to a second bad season and twenty-five thousand pounds then outstanding. By common consent a great famine had never been met with less loss and suffering to the people, and two years later hardly a trace of it remained. In 1911 the rainfall failed over a considerable area in Gujarat in the Bombay Presidency and again in 1912 in the Ahmednagar District of the Bombay Deccan and both these partial failures demonstrated that the shock of famine is far less severe now, owing to the increased resourcefulness of the people, than it was so late as 1899. Still further evidence in the same direction was furnished when the rains failed over large areas in the United Provinces in 1913-14. This famine affected 17,000 square miles with a population of 5¼ millions, whilst distress was grave in 30,000 square miles with a population of 14 millions.

Three points soon emerged from the year—the people showed greater resisting power owing to their improved economic condition: they met the emergency with wonderful courage and resource; and the application of the relief programme brought the numbers on public works within manageable proportions, and induced the speedy return of the people to their normal avocations when the advent of bountiful rains in 1914 enabled agricultural operations to be generally resumed.

The Government of India is now in possession of complete machinery to combat the effects of drought. In ordinary times Government is kept informed of the meteorological conditions and the state of the crops; programmes of suitable relief works are kept up to date, the country is mapped into relief circles, reserves of tools and plant are stocked. If the rains fail, policy is at once declared, non-officials are enlisted, revenue suspended and loans for agricultural purposes made. Test works are then opened, and if labour in considerable quantities is attracted, they are converted into relief works on Code principles. Poor houses are opened and gratuitous relief given to the infirm. On the advent of the rains the people are moved from the large works to small works near their villages, liberal advances are made to agriculturists for the purchase of plough, cattle and seed. When the principal autumn crop is ripe, the few remaining works are gradually closed and gratuitous relief ceases. All this time the medical staff is kept in readiness to deal with cholera, which so often accompanies famine, and malaria, which generally supervenes when the rains break. Recent experiences go to show that never again will the Government of India be compelled to distribute relief on the tremendous scale demanded in 1899-1900. The high prices of produce have given the cultivators considerable resources, the extension of irrigation has protected a larger area, and labour has become more mobile, utilising to the full the increasing industrialism of the country. For instance, in 1911 the rains in Gujarat failed completely, yet there was little demand for relief works, and the necessities of the cultivators were rather for fodder for their cattle than for money or food for themselves. Various schemes are now under consideration for the establishment of fodder reserves in the villages.

Famine Protection.

Side by side with the perfection of the machinery for the relief of famine has gone the development of famine protection. The Famine Commission of 1880 stated that the best, and often the only means of securing protection from the extreme effects of famine and drought, are railways and irrigation. These are of two classes, productive and protective. Productive works being estimated to yield profits which will pay interest and sinking fund charges are met from loans; protective works, which do not pay, directly from revenue. In order to guarantee that there should be continuous progress with protective works, the Famine Insurance Grant was instituted in 1876. It was decided to set apart from the general revenues Rs. 1½ crores annually, or one million sterling. The first charge on this grant is famine relief, the second protective works, the third the avoidance of debt. The chain of protective railways is now practically complete. Great progress is being made with protective irrigation. Acting on the advice of the Irrigation Commission (*qv*) an elaborate programme of protective irrigation works is being constructed, particularly in the Bombay Deccan—the most famine susceptible district in India—and in the Central Provinces. When these are completed, the shock of drought will be immensely reduced.

The Indian Famine Trust.

Outside the Government programme there is always scope for private philanthropy, especially in the provision of clothes, help for the superior class poor who cannot accept Government aid, and in assisting in the rehabilitation of the cultivators when the rains break. At every great famine large sums have been subscribed, particularly in the United Kingdom, for this purpose, and in 1899-1900 the people of the United States gave generous help. With the idea of providing a permanent famine fund, the Maharaja of Jaipur gave in 1900 a sum of Rs. 16 lakhs, in Government securities, to be held in trust for the relief of the needy in time of famine. This Trust has now swollen to Rs. 28 lakhs, chiefly from gifts by the founder's family. It is vested in trustees drawn from all parts of India, and is freely used in an emergency.

The following statement shows details of Assets as at 31st December 1916:—

	Rs.	a.	p.
Endowment Fund invested in Government Securities vested in the Treasurer of Charitable Endowments—			
Balance brought forward from 1915	28,10,000	0	0
Total Endowment Fund ..	28,10,000	0	0
Government Securities representing Assets temporarily invested—			
Balance brought forward from 1915	8,05,100	0	0
Add—Purchases during the year of 4 per cent. G. P. Notes	2,00,000	0	0
Less—Sales during the year..	....		
Balance at close of the year..	10,05,100	0	0
Cash in Current Account in Bank of Bengal	47,341	8	2
Total available for expenditure	10,52,441	8	2
GRAND TOTAL ..	38,62,441	8	2

The Cost of Famine.

The fruits of this policy are revealed in a return on the last serious famine which has occurred in India. In the United Provinces the failure of the 1913 monsoon, followed by poor and unseasonable cold weather rains, led to a widespread failure of crops affecting an area of 18,200 square miles and a population of 6 millions, but the prosperity of the preceding years had enabled the population to develop a far greater staying power than on previous occasions of famine, nor was the rise in food prices so marked. Government made loans to cultivators amounting to over £1,250,000, besides suspending land revenue and sanctioning remissions amounting to over £717,000. The necessity for direct measures of relief did not arise till December, which is considerably later than on previous occasions of famine. The cost of direct relief operations to Government, including provision of cattle-fodder, was about £382,000, a far smaller figure than in the famine of 1907-08, although the estimated loss of food-grains was almost as great. The Public Works Department, the civil authorities, and district boards arranged for the carrying out of numerous projects with famine labour. These comprised construction of roads, tanks and irrigation works and the reclamation of ravine land—all works of undoubted utility. Gratuitous relief amounted to £80,600; it was given principally to persons incapable of working. A marked feature of the famine was the extreme scarcity of fodder, which was met chiefly by concession rates for the carriage of fodder on railways and the supply of hay from the forests. Much good work was done by non-official efforts, and a charitable fund was raised to the amount of £27,424. The total cost of the famine to Government is estimated at £820,000, as against £2,130,000 in 1907-08. Good rains in July and September 1914 finally relieved the situation and ensured a good kharif crop.

BOY SCOUTS.

The Boy Scouts movement, initiated in England by Lt.-Gen. Sir Robert Baden Powell (the Chief Scout), has spread widely in India, and the Boy Scouts Association has received the patronage of the Viceroy and the heads of the local governments. The aim of the Association is to develop good citizenship among boys by forming their character—training them in habits of observation, obedience and self-reliance—inculcating loyalty and thoughtfulness for others—and teaching them services useful to the public and handicrafts useful to themselves.

The following division of duties of the Indian Headquarters is officially published for information:—*The Assistant Chief Commissioner* deals with all matters of organisation and Discipline, including the issue of Warrants to new local Associations and Officers, also the registration of new troops, which should be applied for on Form C. obtainable from the General Secretary. Recommendations for awards of Life Saving Medals and Certificates should be made to him and also all applications for exemption from the swimming test for 1st class (Regulation 21) and all correspondence on the subject of Challenge Trophies. Owing to the war the movement in India has suffered considerable dislocation and embarrassment. Fifteen new associations were formed during 1914-15, but six others are temporarily in suspension. The latest annual report gives the followng details of a census of Boy Scouts Associations in India:—Local Associations, 43. Troops, 99. Scout Masters, 90. Assistant Scout Masters, 26. Scouts, 2,161. Woif Cubs, 180. Grand Total, 2,457.

The General Secretary deals with routine matters official publications, sale of badges, and also all matters connected with the official publication, *The Boy Scouts Gazette of India*. Local Secretaries can communicate with him direct on these matters and it is not necessary to refer to the Commissioners on such subjects.

The *Boy Scouts Gazette of India* published monthly, is the official organ of the Movement in India and in it are notified all official notices and orders issued by the Indian Headquarters. It is obtainable from the General Secretary. Subscription Rs. 2-8-0 per annum.

HEADQUARTERS STAFF IN INDIA

Chief Commissioner—Major-General E. S. May, C.B., C.M.G, Lucknow.

Deputy Chief Commissioner—Lieut.-General Sir W. R. Birdwood, K.C.S.I., K.C.M.G., C.B., C.I.E., D.S.O. *On Service.*

Offg. Deputy Chief Commissioner—Major-Genera R. Wapshare, C.B., Poona.

Commissioner for Sea Scouts—Captain W. Lumsden, C.V.O., A.D.C., R.N., Director, Royal Indian Marine, Bombay.

Deputy Commissioner for Sea Scouts—Commander E. A. Constable, A.D.C., R.N., Commandant, Calcutta Port Defence Volunteers.

Assistant Chief Commissioner—Captain W. P. Pakenham-Walsh, R.E., Poona.

Hon. General Secretary—Captain A. G. Potter, A.D.C., Dilkhusha, Lucknow.

Hon. Treasurer—E. E. Savi, Esq., Alliance Bank of Simla, Calcutta.

Bankers.—The Alliance Bank of Simla, Calcutta.

Co-operative Credit.

Before the end of the last century the co-operative movement had proved so successful in its attempt at re-generating rural life in countries with such diverse conditions as Germany, Italy, Switzerland and Ireland, that enthusiasts like Mr. Wolff, social workers like the late General Booth, and Indian administrators like Sir Anthony (now Lord), Macdonell and Mr. Dupernex were anxious to introduce the movement to improve the economic and moral condition of the Indian ryot. More than sixty per cent. of the vast population of India subsists on agriculture and the majority of these millions generally live, under present conditions, from hand to mouth. The ryot's occupation is healthy and productive, and he is proverbially honest and straightforward in his dealings, except when years of famine and hardship make him at times crafty and recalcitrant. Owing to his poverty, combined with deficiency in education and consequent lack of foresight, however, he has to incur heavy debts to meet occasional expenses for current seasonal purposes, the improvement of his land, or for ceremonial purposes; and he has therefore to seek the assistance of the local money-lender, known as the Sowkar or the Mahajan. The rates of interest on such advances vary from province to province and even in different parts of a province. The average rate ruling throughout Bombay Presidency is lower than in most other provinces and there are again variations in the rate in the Presidency itself; it is 6 to 12 per cent. in Gujerat, and 12 to 24 per cent. in parts of Deccan, while it rises to the enormous figure of 50 per cent. in several tracts. In addition to charging these excessive rates the Sowkar extorts money under various pretexts and takes from the needy borrower bonds on which heavy stamp duties are payable. One of the chief causes of the ryot's poverty is, that owing to the absence of security and his short-sightedness due to want of education he does not as a rule collect and lay by his savings, but fritters away his small earnings in extravagant and unproductive expenditure on the purchase of trinkets and ornaments and on marriage and other ceremonies. In some cases, he hoards coins under the ground with the likelihood that on his death the money is lost to his family for good. This absence of thrift and the habit of dependence, in case of difficulty, on the Government or on the Sowkar are the bane of his life. There is besides a total absence of ideals or desire for progress. A Co-operative Society would change all this, inasmuch as it would provide him with a suitable institution in which to lay by his savings and would teach him the valuable lesson of self-help through the sense of responsibility he would feel in being its member. Thus the chronic poverty and indebtedness of the Indian agriculturist afford a very good field for the introduction of co-operative methods, especially as his work is of a productive character likely to enable him to earn a better living under circumstances more favourable than they are at present.

First Scheme Proposed.—The question of improving rural credit by the establishment of agricultural banks was first taken up in the early nineties when Sir W. Wedderburn, with the assistance of the late Mr. Ranade, prepared a scheme of Agricultural Banks which was approved of by Lord Ripon's Government but was not sanctioned by the Secretary of State. The matter was not again taken up until about fifteen years later when Lord Wenlock's Government in Madras deputed one of its ablest officers, Mr. F. A. (now Sir Frederick) Nicholson, to report on the advisability of starting Agricultural and other Land Banks in the Presidency for the relief of the agriculturists. Sir Frederick had prepared himself by a thorough study of Agricultural Banks and Co-operative Societies and had visited many European countries to see for himself the various developments of the co-operative movement. He was also conversant with the social conditions of the Presidency where there had been in existence an institution called the Nidhi, which corresponded in some respects to the Provident Funds and Friendly Societies in European countries. Though these institutions provided cheap local capital to the agriculturists the spirit of co-operation was lacking in them. This want was supplied in early times by the Village Panchayats which showed to what extent communal life and ideas of local self-government had developed in India. Sir Frederick, after thoroughly going into the conditions of the Presidency, submitted an exhaustive report to Government suggesting that the formation of Co-operative Societies afforded an excellent means for relieving rural indebtedness. The report surveyed the growth of the co-operative movement in European countries, the conditions favourable to its development in India, if introduced, and the difficulties to be encountered in introducing it and making it a success here. Finally, it contained for the consideration of Government a draft Bill for the organization of Co-operative Societies. Sir Frederick pleaded for concessions to be given to the Societies—such as exemption from the income-tax and remission of the stamp duty—as he felt that it would be possible to attract the people to the new movement only if Government showed its active sympathy towards it at the commencement. He ended with a fervent appeal to the non-official community "to find a Raiffeisen" who would help the ryots of this country in achieving results equal to those obtained by Raiffeisen's noble efforts in Germany. Unfortunately the report was not received favourably either by the non-official public or by the Government of Madras, and no action was taken on its suggestions.

Famine Commission of 1901.—The next few years saw two of the worst famines that India had ever suffered from, and in 1901, Lord Curzon appointed a Commission to report on the measures to be adopted in future to prevent famines and to protect the ryot from their ravages. The Commission laid stress on the proper working of the Agriculturists' Loans and the Land Improvement Loans Acts under which *takavi* advances are made to cultivators. This system was given a long trial in the years previous to the great famines as well as during the ten years succeeding the 1899-1900 famines. But it is acknowledged on all hands that the system has been a failure

as it is clear that it is not facility for obtaining cheap capital alone which will raise the agriculturist and relieve him from his debts, but the provision of capital combined with the inculcation of habits of thrift and self-help. The Commission also recommended that the principal means of resisting famines was by strengthening the moral backbone of the agriculturist and it expressed its view that the introduction of co-operation in rural areas might be useful in securing this end.

Co-operative Credit Societies' Act.—These recommendations induced Lord Curzon to appoint a Committee with Sir Edward Law at its head to investigate the question and a Report was submitted to Government recommending that Co-operative Societies were worthy of every encouragement and of a prolonged trial. Sir Anthony (now Lord) Macdonell and others were at the same time making experiments on similar lines in the United Provinces and the Punjab with satisfactory results. All these activities, however, took a practical shape only when Lord Curzon, with his zeal for getting things done which made him famous in India, took up the question in all earnestness, and his Government introduced in the Supreme Legislative Council a Bill to provide for the constitution and control of Co-operative Societies. The main provi ions of the Bill which became the Co-operative Credit Societies' Act (Act X of 1904) were:—

(1) That any ten persons living in the same village or town or belonging to the same class or caste might be registered as a Co-operative Society for the encouragement of thrift and self-help among the members.

(2) The main business of a Society was to raise funds by deposits from members and loans from non-members, Government and other Co-operative Societies, and to distribute money thus obtained by way of loans to members or with the special permission of the Registrar, to other Co-operative Credit Societies.

(3) The organization and control of Co-operative Credit Societies in every Presidency were put under the charge of a Special Government Officer called the Registrar of Co-operative Credit Societies.

(4) The accounts of every society were to be audited by the Registrar or by a member of his staff.

(5) The liability of a member of a society was to be unlimited in the case of a Rural Society.

(6) No dividends were to be paid on the profits of a rural society, but the profits were to be carried at the end of the year to the Reserve Fund, although when this fund had grown beyond certain limits fixed under the bye-laws, a bonus might be distributed to the members.

(7) In the case of Urban Societies no dividend was payable until one-fourth of the profits in a year were carried to the Reserve Fund.

Soon after the passing of the Act the local Governments in all the Presidencies and major provinces appointed some of their best officers as Registrars with full powers to organise, register, and control the management of societies. In the early stages of the working of this Act, Government loans were freely given and the response to the orga nising work of the Registrars was gradual and steady throughout most parts of the country.

New Act Introduced.—As co-operation progressed in the country defects were noticed in the Co-operative Credit Societies' Act and these were brought to the notice of Government by the Provincial Conferences held under the auspices of Local Governments in various Presidencies, as well as by the Annual Conferences of the Registrars. In two directions the need for improved legislation was especially felt. In the first place, the success of credit societies had led to the introduction of Co-operative Societies for distribution and for purposes other than credit for which no legislative protection could be secured under the then existing law. And in the second place, the need for a freer supply of capital and for an improved system of supervision had led to the formation of various central agencies to finance and control the original credit societi s and these central agencies ran all the risks attendant on a status unprotected by legislation. The Government of India, recognising the need for removing these defects, decided to amend the old Act, and a Bill embodying the essential alterations proposed was introduced in the Imperial Legislative Council, and after a few amendments it emerged from the Council as the Co-operative Societies' Act (II of 1912) replacing Act X of 1904. The outstanding features of the new Act were as follows:—

(*a*) It authorised the formation of societies for purposes other than credit, which was possible under the old Act only with the special permission of the Local Government. This extension of Co-operation to purposes other than credit marks an important stage in its development in India.

(*b*) It defined in precise terms the objects for which Co-operative Societies could be organised.

(*c*) It removed the arbitrary division of societies into Rural and Urban.

(*d*) It facilitated the growth of central agencies by insisting on a limited liability by means of a special clause about the registration of a society one of whose members is a registered society.

(*e*) It empowered the Local Government to frame rules and alter bye-laws so as to put restrictions on the dividends to be declared by societies and allowed them the discretion to sanction distribution of profits in the case of unlimited liability societies to their members.

(*f*) It allowed societies with the permission of the Registrar to contribute from their net profits, after the Reserve Fund was provided for amounts up to 10 per cent. of their remaining profits to any charitable purpose as defined in the Charitable Endowments' Act. This kept the movement in touch with local life by permitting societies to lend assistance to local educational and charitable institutions.

(*g*) It prohibited the use of the word "Co-operative" as part of the title of any business concern except a registered society.

Composition of the Capital of Agricultural Societies.—On the organization of agricultural credit was necessarily concentrated the attention of the promoters, for, it presented a far more important and far more difficult problem than industrial credit. There was a great variety of types among the agricultural societies started in different provinces, and some Registrars adopted the "Schulze-Delitzsch," some the "Raiffeisen," and some the "Luzzatti" methods in their entirety. The best course as pointed out by Mr. Wolff would have been to start a few model societies and leave the movement to develop on the lines which most suited the peculiar requirements and conditions of the country. The commonest type, as in the Punjab, Burma, and the United Provinces, is the unlimited liability society with a fee for membership and a small share capital, the share payments to be made in instalments. In some cases the system insists on compulsory deposits from members before entitling them to enjoy the full privileges of membership. The system in Bombay, Bengal, and the Central Provinces is entirely different, there being no share-capital but only a membership-fee. Part of the working capital is raised by deposits from members and other local sympathisers but the bulk of it is obtained by loans from Government and other Co-operative Societies. In all the Presidencies, the Government set apart every year a certain sum to be advanced as loans to newly started Co-operative Societies, usually up to an amount equal to the deposits from members, raised by a society. State aid in the form of money doles has now become an exception rather than the rule, and this withdrawal in no way hampers the development of the movement on account of the rapid increase of financing agencies like District and Provincial Central Banks and the growth of public confidence in the primary societies. For agricultural societies generally, the main sources of Capital are shares, deposits of members, loans and deposits from non-members and from Central and other Societies; and the contribution to the total working capital by each of these heads of income is in round numbers that indicated below:—

	Rs.
Shares	76,48,356
Deposits from members	34,03,856
Loans and deposits from non-members	35,17,241
Loans and deposits from other societies	4,55,531
Loans from Provincial and Central Banks	2,87,43,006
State Aid	13,01,514
Reserve Fund	60,25,198

In some Provinces, notably in the Punjab and Bombay, the members' shares and deposits form more than 25 per cent. of the working capital.

Constitution of Agricultural Societies.—The typical Agricultural Society in India corresponds to the "Raiffeisen" society, the management being gratuitous, the profits indivisible, and the area of work limited. Usually, the Secretary if he is a *bona-fide* member of the Society gets a monthly pay of Re. 1 to Rs. 5 with a bonus at the end of the year equal to a fourth of annual profits. In parts of the country there are villages where a few literate men may be found but most of these are hardly fit enough to undertake the responsible work of a Secretary, being practically ignorant of account keeping. In such villages either the village school-master or the village accountant known in Bombay as the Talati, is appointed, to the post with a remuneration a little higher than that paid to the Secretary who is a *bona-fide* member. In some places, where a suitable person is not available on this low pay, neighbouring societies are grouped together with a whole-time, well-paid, and Secretary. This arrangement, which has its advantages, involves the drawback that the outsider working as Secretary does not naturally feel as much interest about the Society's working as a *bona-fide* member does and is less amenable to the control of the members. As the work of Societies develops, the need for trained Secretaries is being felt more keenly for it is now realized that the function of a Secretary does not consist merely in writing the accounts correctly. With a view to meet the demand for trained Secretaries, a training class has been organized in Bombay for the last two years by the Servants of India Society with the assistance and support of the Registrar of Co-operative Societies, Bombay, and a few local co-operators. Thirty to forty Secretaries selected by the Registrar attended the class and had all their expenses defrayed by Government. Lectures were delivered at the class on the details of the work of co-operative societies and on the main principles of co-operation. This interesting experiment deserves to be copied in other parts of the country. Similar classes are being organised in Bihar and Orissa, in United Provinces, and Bengal.

Internal Management of Societies.—The Managing Committee consists of 5 to 9 intelligent members of the Society, the Chairman being usually the leading person in the village. The daily work of the Society is carried on by the Secretary, but the Managing Committee supervises the work and has alone the power to admit new members, to receive deposits, arrange for outside loans, grant loans to members and take notice of defaulters. The accounts of the Society are kept by the Secretary and the necessary forms, papers, and books are usually supplied from the Registrar's office to simplify the work of the Secretary. The books are kept according to the rules framed by the Local Governments and are open to inspection by important local officials and the Registrar and his staff. The accounts are audited, at least once a year, by the Auditor of Co-operative Societies and the Societies are inspected from time to time by specially appointed Inspectors. The loans are mostly given on the security of two co-members, or rarely, on the simple bond of the borrower. Under the Act, the Societies are allowed under certain conditions to advance loans on the hypothecation of moveable or immoveable property and there is nothing uncooperative in this so long as personal security which is the central principle of co-operation is given and the borrower's property is recognized as only a secondary or collateral protection. Mortgages are taken occasionally especially in the case of long term loans and loans for the liquidation of old debts. In some Provinces more general use has been made of mortgage

security than in others, and mortgages have been at times more freely accepted as security than is either necessary or desirable. In Madras the percentage of loans secured on mortgage on the total amount advanced during 1913-14 was 47, in Bombay 43, in Burma 36. the average for all the Provinces being 14 per cent. This feature is noteworthy as real credit on a wholesale scale is not quite compatible with the true spirit of co-operation. At the Annual General Meeting held at the close of the co-operative year, the accounts are submitted, the balance-sheet passed, and a new Managing Committee with, if necessary, a new chairman and secretary is elected. The general meeting fixes in some provinces the borrowing limit of individual members, lays down the maximum amount upto which the Managing Committee may borrow during the ensuing year, dismisses members for misconduct or serious default, and settles the rates of interest for loans and deposits. As these meetings are informal, other local topics of public utility are sometimes discussed. All the net profits of the society are annually carried to the Reserve Fund, which is indivisible, that is, incapable of distribution as dividend or bonus, which cannot be drawn upon without the sanction of the Registrar, and which must be invested in such a manner as the Registrar prescribes. It is intended to meet unforeseen losses and to serve as an asset or security in borrowings. Except in the Central Provinces and Madras, the Reserve Funds of primary societies are generally utilised as an addition to their working capital though steps are being taken in some parts of the country to stop this practice and to insist on the Reserve being kept entirely apart from the working capital and invested in Government securities or placed as floating deposits in reliable Central Banks. The Government of India state in their Resolution of 17th June 1914 "that while there may be advantages in the earlier stages in using the Reserve as part of the working capital of the society, it should gradually, as it becomes more important, be set apart for separate investments." The amount of the Reserve Fund of agricultural societies is roughly 60 lakhs of Rupees, and forms 8·11 per cent of their total liabilities, and with the addition of the last year's profits, to be carried to Reserve, 19 per cent. of the total outside capital of the societies including members' deposits.

Progress of the Movement.—The following statement shows the progress of Agricultural Societies up to the end of the official year 1915-16 :—

Provinces.	Number of Societies.	Number of Members.	Total Working Capital.	Reserve Fund.
			Rs.	Rs.
Madras	1,601	1,00,761	74,95,149	5,35,740
Bombay	835	65,832	40,58,801	3,05,807
Bengal	2,067	94,074	56,94,370	6,28,050
Bihar and Orissa	1,221	57,459	20,37,795	2,09,190
United Provinces ..	2,944	1,06,333	51,32,044	4,69,460
Punjab	3,319	1,41,666	1,48,24,635	27,33,992
Burma	1,706	38,573	53,44,362	6,36,141
Central Provinces ..	2,436	41,554	32,77,173	2,75,082
Assam	285	15,792	3,95,185	63,255
Coorg	23	2,641	1,15,709	24,133
Ajmer	349	11,664	9,15,600	....
Mysore	648	37,862	16,71,616	47,845
Baroda	295	8,647	6,32,257	96,503
TOTAL ..	17,729	7,22,858	5,15,94,696	60,25,198

Progress of the Movement.—The following statement shows the progress of Agricultural Societies up to the end of the official year 1915-16:—*concld.*

Provinces.	Cost of Management.	Net Profit during the year 1915-16.	Deposits.	Usual Rate of Interest on Loans to Members.
	Rs.	Rs.		Per cent.
Madras	56,329	43,740	7½	9⅜
Bombay	31,830	1,23,283	6½ & 7	9⅜
Bengal	38,963	1,92,498	9⅜ & 10½	12½ & 18⅝
Behar and Orissa	7,358	1,23,825	12½	12½, 15⅝ & 18¾
United Provinces	74,451	1,78,900	12	15
Punjab	68,955	8,15,559	6 to 9	12½
Burma	1,28,034	2,56,382	....	15½
Central Provinces	3,878	92,351	9	12
Assam	5,639	22,935	9	12½
Coorg	3,145	7,609	5, 6¼ & 8	12½
Ajmer	6,766	27,493	10	12
Mysore	12,806	70,370	6 to 7½	9 to 12
Baroda	6,438	33,456	4½ to 7	9⅜
TOTAL ..	4,44,592	19,88,401	....	....

The progress of the movement in different provinces varies according to the activity in organisation work as well as the special conditions of each province—the prevailing rates of interest being the most important of these. A few Indian States have also introduced legislation similar to the Co-operative Societies' Act in their territories and the most prominent of these are Mysore and Baroda. Hyderabad, Gwalior and Indore have only very recently introduced co-operation in their States. The results of the experiment have been as satisfactory as in British India.

Non-agricultural societies.—Just as rural societies are the means of resuscitating the agricultural industry, a class of society called the non-agricultural societies, has grown in towns and cities for improving the economic and moral condition of persons engaged in handicaps and cottage industries, of artisans and small traders, members of particular castes and employees and of big firms and Government departments. Non agricultural Societies, except those for handicraftsman, artisans, and persons of the poorer classes; referred to later have usually a limited liability. This is due partly to the absence of any assets in real property among their members, but mainly to the field of their work not being compact as in the case of agricultural societies where every member may be expected to know every other member. Their constitution is based on the 'Schulze Delitzsche' model and in most cases the management is honorary, though sometimes, when the sphere of society's work is extended, a paid staff is employed. There is in all societies a substantial share capital, payments being made in instalments, and the rest of the working capital is obtained by local deposits from members and others and loans from co-operative and Joint Stock Banks. Of the total working capital of roughly Rs. 1,16,00,000 Rs. 24,00,000 represent loans and deposits from non-members, Rs. 1,53,000 loans and deposits from other Societies, Rs. 6,76,000 loans from Provincial or Central Bank, Rs. 33,00,000 deposits from members, Rs. 43,00,000 share capital, Rs. 62,000 reserve fund and Rs. 7,00,000 State aid. At the end of every year one-fourth of

the net profits must be carried to the reserve fund and the balance may be distributed as dividend or bonus. There are a few serious drawbacks in the working of these societies and complaints about them are noticeable in many of the Registrars' annual reports. The most serious of these complaints are that the spirit of co-operation is lacking in many non-agricultural societies, that there is too great a desire to go in for profits and dividends and a growing tendency to make the societies close preserves once they have started running on profitable lines. The rates of interest on loans are at times higher than they ought to be, and the men at the head of the societies are loth to admit new members who are in need of loans for fear of the latter cutting down the profits, societies of employees of firms, railway companies, and Government offices there are in some provinces. There are, again, a few societies organized on the lines of village Popular Banks of Europe to assist small non-agricultural traders and artisans in towns and there are also some societies comprising members of particular communities. Some of the larger non-agricultural societies, after meeting the needs of their members, have large balances on hand, which they are allowed, with the previous sanction of the Registrar, to advance to smaller societies.

With the establishment of factories in India an important labouring class has grown up in big industrial towns and this class is as deeply indebted and as badly remunerated as the agriculturists. Co-operation, if introduced among people of this class, would open a new life to them besides being the means of their economic regeneration. No serious efforts have hitherto been made in this direction, as urban co-operation has so far been confined more or less to middle class people. Under the auspices of an organization known as the Debt Redemption Committee 18 mill hands and working men's societies have been organised in Bombay. These Societies have been successful in redeeming the old debts of some 500 members to the extent of Rs. 1,50,000 in the course of the last three years. The working capital of the Societies is only Rs. 65,000 to which the deposits from members contribute Rs. 10,000. Some work in this direction has also been done in Madras. But societies should be multiplied a hundredfold among all classes of working-men so that, if successful, they may become the forerunners of a healthy Trade Unionism in India.

Progress of Non-agricultural Societies.—The following statement shows the progress of Non-agricultural Co-operation up to the end of the year 1915-16:—

Provinces.	Number of Societies	Number of Members	Total Working Capital.	Reserve Fund.	Cost of Management.	Net Profit during the year.	Usual rate of Interest on	
							Lendings.	Borrowings.
			Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Madras ..	157	34,565	23,23,622	1,46,201	74,052	78,788	6	9⅜
Bombay ..	152	39,164	35,37,391	1,42,560	41,495	99,282	6 to 6¼	9 to 18¾
Bengal ..	125	22,214	21,04,826	91,956	25,121	1,03,961	6¼	9⅜ to 12½
Behar and Orissa ..	55	7,995	2,16,749	11,738	5,032	6,470	4 to 12½	9⅜ to 18¾
United Provinces ..	182	6,918	4,62,969	40,408	10,677	17,371	12	15
Punjab ..	32	2,969	2,04,389	44,617	9,740	9,899	6 to 8	6¼ to 12½
Burma ..	46	3,526	6,23,437	1,09,818	8,268	62,393	..	..
Central Provinces ..	93	2,085	1,32,886	13,964	1,269	5,854	9	12
Assam ..	18	1,638	1,74,077	14,496	3,776	7,622	6 to 6¼	9⅜ to 12½
Coorg	..	..	....	....	..	..	..	..
Ajmer	..	..	....	..	..	..	..	..
Mysore ..	134	25,392	17,43,750	98,856	26,042	1,24,482	5½ to 6½	9 to 12
Baroda ..	25	1,729	97,157	2,819	1,746	2,224	4½	6¼ to 9⅜
TOTAL ..	1,019	1,48,195	1,16,21,253	7,17,434	2,07,218	5,18,346	..	..

Loans advanced.—The total amount of loans advanced to members by agricultural and non-agricultural societies during the year 1915-16 were Rs. 2,27,92,656 and Rs. 1,11,32,2[illegible]2, respectively, as against the total of less than Rs. 25 lakhs issued by both these classes of societies in the year 1906-7. Reports from all the Provinces do not give statistics regarding the objects for which loans are advanced, but from those published in some of the Provinces, it appears that the percentage of loans given for cultivation expenses by agricultural societies is 7 in Madras, 10 in Bengal, 16 in Behar and Orissa, 9 in the Punjab and 22 in the Central Provinces, and that loans for purchase of cattle form 10, 8, 16, 20% and 30% of total amount of loans advanced in the respective Provinces Loans for repayment of old debts are frequent, as is apparent from the fact that in Madras they form 41% of the total amount of loans given, in Bengal also 35%, in Behar and Orissa 31%, in Punjab 17%, and in the Central Provinces 15%. As the movement progresses, it is being more and more realised that the early clearance of a member from previous debts after his admission to a society is very desirable and greater attention is being bestowed by the Registrars on this question. It is impossible to insist on the restriction of loans to productive objects and there are circumstances under which unproductive loans are permissible and even advisable. What should be and generally is borne in mind is that precautions are taken by societies that the expenditure is inevitable and that it is not excessive in amount. The chief objects of the loans advanced are cultivation expenses, purchase of live-stock, fodder, seed, manure and agricultural implements, payment of rent, revenue or irrigation dues, land improvement and sinking of wells, purchase of new lands, and personal maintenance in times of scarcity in agricultural societies, and for purchase of raw materials for industries, for trade, for house-building and for food and other necessaries of life in non-agricultural societies. The terms of the loans are one year or less on those for current needs whether for agriculture or petty trade, and up to five years or so on loans for liquidation of old debts or for land improvement. The percentage of the loans repaid by the members of agricultural Societies in 1914-15 to the total amount of loans outstanding in 1913-14 and advanced in 1914-15 was 27, the average for the last four years being 30 per cent. An unsatisfactory feature of the co-operative system in some of the Provinces is the laxity and unpunctuality in the matter of repayment of loans by members and a general apathy in the matter on the part of societies. The amount of loans overdue from members at the end of the year 1914-15 stood at 17 per cent. of the total outstandings due to societies. As co-operation is both financially and educationally a failure unless promptitude of payment is ensured, no efforts are spared by organizers to educate societies in this respect. The Co-operative Societies' Act grants to societies priority of claim against other creditors (except the State or the landlord) to enforce any outstanding demand due to the societies from members or past members upon the crops or other agricultural produce, and upon the cattle, fodder or agricultural implements, in cases where loans have been advanced for the purposes specified. But not content with this, some co-operators have pleaded for special powers of recovery of loans under which overdue loans may be recovered as arrears of land revenue. Most local Governments have framed rules under the Act enabling the Registrar to refer disputed claims to arbitration and to enforce the award of the Registrar in the same manner as a decree of the Civil Court. It is not likely that Government will sanction a special process under which claims against defaulting members may be recovered according to procedure allowed for the recovery of arrears of land revenue. For the existence of a special privilege of this character cannot but lead to laxity in the selection of members and carelessness in the granting of loans and in securing regular repayments on them.

The Financing of Agricultural Societies.—As soon as the initial stage of the movement had passed, a very urgent problem had to be faced. This was to finance the agricultural societies that were growing in all directions. And the problem was solved in different provinces according to the special conditions and the stages of development the movement had attained therein. In Madras a Central Bank, which lent to Co-operative Societies in the Presidency, was started without Government aid as early as in 1907. This was followed by the starting of banks at district head-quarters. In other Presidencies, District Banks were established making good the deficiency in the local capital of the societies within their districts, and in some places Joint Stock Banks were persuaded to make advances direct to agricultural societies or through the medium of District Central Banks. A large number of prosperous non-agricultural societies, as stated above, could afford to lend to agricultural societies. Government aid was also freely given and the advances under this head rose from Rs. 2,84,738 in 1906-07 to Rs. 9,34,663 in 1911-12. With the progress of the movement, however, this aid was discontinued and the only Province which continued the practice was Bombay lending Rs. 2,57,439 in 1911-12. An important cause which led to the continuance of State aid in Bombay was the paucity of Central Banks in the Presidency and the refusal of the Commercial Banks, though constantly approached, to help agricultural societies. When owing to the unwillingness of the ordinary Banks to participate in the movement, the Registrar found it extremely difficult to have even the small number of societies in the Presidency properly financed, Sir Vithaldas Thackersey and the Hon. Mr. Lalubhai Samaldas submitted to Government a scheme to establish a Central Bank for the Presidency, provided certain assistance was promised by Government. As a result of the negotiations that followed, the Bombay Central Co-operative Bank was founded in October 1911, with a share capital of Rs. 7 lakhs and with power to issue debentures at 4 per cent. up to three times the amount of the paid-up share capital, the Government guaranteeing payment of interest on the debentures till their repayment. The Bank was authorised to lend only to registered co-operative societies in the Presidency with

the previous sanction of the Registrar in the case of every individual loan. As an indirect result of the establishment of the Bombay Central Bank, a number of District Banks have since been started in the Presidency.

The drawback of the Bombay and the Madras Central Banks is that neither is a co-operative Apex Bank in the true sense of the term. In the Bombay Central Bank Co-operative Societies are now encouraged to become members and may be expected gradually to assist in shaping its general policy. The share holders of the Madras Central Bank; have agreed to convert their Bank into a Provincial Bank on sound co-operative lines. A Provincial Bank with three Central Banks affiliated to it is in existence in Upper Burma, and this Bank finances primary societies either through the affiliated banks or through the guaranteeing of unions composed of societies. An Apex Bank has been started in the Central Provinces to form an immediate link between the District Banks in the Province and the Commercial Banks in Allahabad and elsewhere. It has worked well and its success led to the establishment of a Provincial Bank with a similar constitution in Behar and Orissa. A scheme has also been set afoot for having a Provincial Apex Bank in Bengal, whereas also in Bihar and Orissa, the primary societies are at present financed by Central Banks at district or *taluka* head-quarters. Recently this project has been abandoned in favour of a Provincial Federation of Central Banks. In the United Provinces primary societies are financed on the same system, and there, too, the starting of a Provincial Apex Bank under which Central Banks will be federated is under contemplation. The Punjab has a Central Banking system and though sooner or later it, too, will have an Apex Bank, no definite proposal for the establishment of such Bank has yet matured.

The Working of Central Banks.—The following statement shows the number and the constitution of the Central Banks in the country up to the end of the year 1915-16:—

Provinces.	Number of Societies.	Number of Members.		Total Working Capital.	Reserve Fund.
		Individuals.	Societies.		
				Rs.	Rs.
Madras	11	960	608	70,70,062	1,24,600
Bombay	4	831	160	3,23,831	5,655
Bengal	39	3,455	1,931	46,49,377	1,11,901
Behar and Orissa	19	850	1,066	16,88,597	44,278
United Provinces	57	5,613	2,979	64,39,338	4,80,909
Punjab	42	1,923	1,485	55,34,404	1,37,937
Burma	3	281	380	7,52,048	9,841
Central Provinces	29	16,771	2,330	36,20,726	55,601
Assam	10	642	112	3,29,275	14,019
Ajmer	5	596	332	8,74,047	20,658
Mysore	17	535	256	8,05,004	12,922
Baroda	3	78	166	2,34,408	2,184
TOTAL ..	239	32,535	11,787	3,23,21,617	10,20,505

The Working of Central Banks.—The following statement shows the number and the constitution of the Central Banks in the country up to the end of the year 1915-16 :—*continued.*

Provinces.	Cost of Management.	Net Profit during the year.	Usual Rate of Interest on	
			Borrowings.	Lendings.
	Rs.	Rs.		
Madras	23,566	73,807	6	7½
Bombay	3,270	14,236	4 to 6	6¼ to 9⅜
Bengal	50,121	1,08,538	6 to 7½	9⅜ to 12½
Bihar and Orissa	35,162	53,935	7	12½
United Provinces	1,24,215	1,37,477	6 to 10	12
Punjab	26,395	1,15,121	6 to 8	8
Burma	2,421	16,051	7½	8
Central Provinces	33,819	69,992	6 & 7½	9
Assam	2,363	12,554	6¼	9
Ajmer	5,265	25,201	6	10
Mysore	3,438	20,779	6 to 7	7½
Baroda	2,067	3,896	4½ to 6	6¼ to 9
TOTAL ..	3,17,102	6,51,890	....	....

The figures for Provincial Banks for the year are given separately as follows :—

Provinces.	Number of Members in Societies.	Number of Individual Members	Total Working Capital.	Reserve Fund.	Cost of Management.	Net Profit during the year.	Usual Rate of Interest on	
							Borrowings.	Lendings.
			Rs.	Rs.	Rs.	Rs.		
Madras ..	Included under Central Banks.							
Bombay ..	16	814	18,46,736	16,467	19,740	42,178	4 to 5	7 to 7½
Bihar and Orissa.	25	15	3,84,361	4,516	2,398	6,049	5	12
Burma ..	1,206	438	36,19,757	62,507	19,553	Loss. 9,020	7	9
Central Provinces	....	128	16,78,402	33,000	5,969	16,511	5	7
Mysore ..	308	504	2,00,377	....	857	2,342	6	7½
TOTAL ..	1,555	1,899	75,29,256	1,16,490	48,517	58,060	....	....

The constitution of Central Banks is not uniform, but the existing Banks may be classified under three general heads:—(1) Banks of which the membership is confined to individuals or where societies are admitted as members on exactly the same footing as individuals, (2) Banks of which the membership is confined to Societies, and (3) Banks which include Societies and individuals as their members and secure to Societies separate representation on the Board of Directors. The number of central societies in the various Provinces falling under each of the three and other classes described above are approximately as shown below:—

Provinces.	Provincial Banks.	Capitalist Central Banks. (1)	Pure Central Banks.	Mixed Central Banks. (2)	Guaranteeing Unions. (3)	Provincial Unions.	Total.
Madras	..	5	1	5	30	1	42
Bombay	1	..	1	3	..	..	5
Bengal	..	2	6	31	12	..	51
Bihar and Orissa	1	..	1	18	1	..	21
United Provinces	..	..	8	49	..	..	57
Punjab	..	13	19	10	..	..	42
Burma	1	..	..	3	189	..	193
Central Provinces	1	..	..	29	125	1	156
Assam	..	3	1	6	2	..	12
Ajmer	..	..	..	5	..	..	5
Mysore	1	..	..	17	..	..	18
Baroda	..	..	1	2	..	..	3
TOTAL ..	5	23	38	178	359	2	605

Functions of Central Banks:—The functions of Central Banks are to balance the funds of Societies and to supply capital. But their duties are not limited to the provision of banking facilities only, but include the organisation and supervision of societies. Hence where the Central Banks are not formed on a capital basis, they perform the functions of supervision and control of the Societies affiliated to them, and in some Provinces they also organise new Societies and even take up the entire educational work now done by the Registrar. They may also be expected to supplement, in lieu of a small fee to be paid by the societies, the auditing work done by the Registrars who now find it very difficult, owing to the increase in the number of societies, to cope with this work with the limited staff at their disposal. Usually the Central Bank is only possible for the whole of a district, as the personnel necessary for its successful working would be difficult to secure in a smaller area. However, in different parts of the country we notice the existence of Central Societies for *talukas* and occasionally for smaller tracts. The creation of such bodies has been facilitated by the amended Co-operative Societies' Act, which came into force in 1912. Previous to the passing of this Act, Central Societies were started unsystematically in various Provinces according to local ideas, but their formation has been made uniform by the new Act insisting on a limited liability in the case of a society of which a member is a registered society. An important class of institutions included under the statistics of Central Societies are unions which may be described as federations of societies which are maintained for supervision, either combined or not with the assessment or guarantee of loans to primary societies, and which do not undertake banking business.

It may be mentioned that in most of the Provinces the work of organising and looking after the societies is done by the Registrar with the help of assistants and a few honorary non-official workers. Where the Central Bank system has properly developed, the Directors of the Central Bank either themselves or through a paid agency organise societies and, as stated above, supervise their working. The number of honorary workers is steadily increasing and in some Presidencies there is a staff of specially-appointed honorary organisers who regularly assist the Registrars. There is, however, scope for organisation societies on the lines of similar institutions in England and Ireland, and if the District Banks and Unions are affiliated to a Co-operative Provincial Apex Bank, it may be possible to have an Organisation Department of the Bank with branches in the districts. In the Central Provinces there has been for some years a federation of Co-operative Banks which promises to develop into a truly co-operative organising and controlling agency. The federation provides a regular and efficient system of supervision audit and control, arranges for the training of the federation staff, attempts to secure uniformity of practice among co-operative institutions and to promote their interest and fosters the spread of co-operation by active propaganda. A Provincial Union has also been started in Madras, but its objects are mainly educational and propagandist. A Central Institute to focus the efforts of co-operative workers and to carry on propagandist work has lately been projected in Bombay,

Other forms of Co-operation.—After the passing of the new Co-operative Societies' Act the application of co-operation to purposes other than credit was greatly extended, but as yet there has been no general demand for productive and distributive co-operative societies as is noticeable in England and elsewhere. At the end of the year 1915-16 there were very few store societies in the country, the Madras Presidency claiming 13, of these with a member hip of 4,911 and a working capital of Rs. 2,53,535. There are 4 stores in Behar and Orissa, 11 in Bombay, 21 in Baroda, 21 in Mysore, 4 in Bengal and 8 in United Provinces. In some Provinces efforts have been made to revive the ancient handicrafts of the country and cottage industries by organising Co-operative Societies for the workers. Many of these societies merely provide cheap credit, but in some places they undertake the supply of raw material and the sale of manufactured goods. An important industry which flourished in India before the introduction of machinery was the Handloom Weaving Industry, and efforts have been made to revive it by the formation of productive co-operative societies of handloom weavers. Most of the Weavers' Societies are not merely credit societies, but undertake the purchase of good yarn for members, and in some cases have store branches to sell the cloth produced by them. They have also been instrumental, prominently in Bombay, the United Provinces, and the Central Provinces, in introducing improved looms and methods amongst the conservative weaving classes. The number of these societies in Bombay is 31, in Bengal 17, in Madras 1, in the United Provinces 2, (excluding a large number of weavers' credit societies in the Central Provinces 53, in Burma 4, in Assam 4, in the Punjab 12, in Behar and Orissa 8, in Baroda 11, and in Mysore 21.

Other industrial societies are those for "gaolees" or milkmen, dyers, basket and brass workers in the Central Provinces, "Chammars" and "dhors" in Bombay and the Punjab, lacquerware workers, carpenters, wood carvers, black-smiths and potters. There are also building societies in Madras, zamindari societies in Bengal and a Sugar Factory worked on co-operative lines in Benares. One of the most interesting experiments in non-credit co-operation is the Carpenters' Workshop at Bareilly in the United Provinces. Three Housing Societies have been started in Bombay and a Housing Association has been founded to encourage the formation of more such societies. There are eight Building Societies in Madras and a few more in Mysore. There are Dairy Societies in the Bombay Presidency, 2 in Behar, 2 in the Central Provinces, one in Baroda, one in Mysore, one in Bengal and 2 in the United Provinces. Co-operative Societies for the joint sale of agricultural produce are becoming popular as Co-operative Credit thrives and there has been in the last few years, a substantial increase in the number of sale societies especially in Bombay. In Burma there are 18 Societies for the joint sale of paddy. Co-operative Creameries and "ghee" producing societies have been started in some places. It is also a pioneer in the matter of co-operative insurance, and has 306 Calcutta Insurance Societies with a membership of 5,350. Ten Cattle Insurance Societies have also been started in Coorg, one in Bengal and five in the United Provinces. The total number of non-credit societies, whether agricultural or non-agricultural, is only 617. The following table exhibits the progress of other forms of co-operation in the different parts of the country:—

Type of Society.	Madras.	Bombay.	Bengal.	Bihar and Orissa.	United Provinces.	Punjab.	Burma.	Central Provinces.	Assam.	Coorg.	Ajmer.	Mysore.	Baroda.	TOTAL.
Purchase or Purchase and Sale — Non-Agricultural	13	38	2	15	6	17	..	..	..	..	33	3	..	127
Purchase or Purchase and Sale — Agricultural	8	21	3	..	1	..	..	..	..	..	5	..	..	38
Production — Non-Agricultural	1	1	..	..	..	..	..	..	..	..	..	..	..	2
Production — Agricultural	..	2	1	..	..	..	1	23	..	..	2	1	..	30
Production and Sale — Non-Agricultural	..	1	26	2	1	..	..	2	..	..	1	..	..	33
Production and Sale — Agricultural	..	7	..	..	7	..	18	1	..	1	9	2	..	45
Others — Non-Agricultural	9	3	1	..	..	..	..	1	..	..	..	..	..	14
Others — Agricultural	..	..	..	..	..	..	2	..	..	..	4	..	..	6
GRAND TOTAL ..	31	73	33	17	15	17	27	..	..	1	54	6	..	295

The figures for Insurance Societies are given separately.

Province.	Number of Societies	Amount of Risk insured.	Premium Collected.	Number of Animals.		Claims paid.	Funds in hand at close of year.
				Insured.	Lost.		
		Rs.					Rs.
Bengal..	1	130	3	5	..	..	15
United Provinces ..	5	10,284	260	399	15	..	667
Coorg	10	4,410	4,069	488	97	1,054	4,590
Burma..	305	2,87,051	9,737	7,929	75	685	10,671
TOTAL ..	321	3,01,775	14,069	8,821	187	1,749	15,943
Burma Re-insurance.	1	1,13,050	4,022	6,209	37	247	3,626

Agricultural Co-operation.—Agricultural societies have until recently been engaged only in supplying cheap credit to their members but there are various other fields of work to which they may extend their activities. Grain Banks may be started with advantage, receiving deposits in kind and allowing these to accumulate to be sold at profitable rates or distributed to the members in times of scarcity. Such Banks have been started in Bombay, Madras, and Bengal. Societies on a similar principle for the storage of fodder may assist in solving what is likely to become in the near future an important problem in rural economy. Another direction in which the co-operative principle is being adopted is the starting of societies for purchase of and distribution among members of good unadulterated seed. A number of small seed societies have been organized in the Bombay Presidency and in the Central Provinces the work appears to have been well organized. Societies for the co-operative purchase and sale of manure will also prove a great boon, and a few such stores have been established in Madras, Bengal and Bombay.

In some places Credit Societies undertake the joint purchase of agricultural implements for members, while in others separate registered societies do this work. Where the system of District Central Banks has developed on right lines this work is taken over by these Banks for the Societies affiliated to the Banks.

Another interesting development is the starting of cattle-breeding Societies in the Central Provinces and elsewhere. It is anticipated that these Societies will assist in supplying the keen demand that exists for bulls of good stock. Agricultural Stores have been worked with a certain amount of success in Bombay and Madras. In Mysore there are two Societies for rice-hulling and the manufacture of jaggery and one for lift irrigation. There is one irrigation Society in Bengal and another in the United Provinces. A unique co-operative effort is the formation of a co-operative dispensary for the members of rural Societies at Futwah in Behar. Government has of late made attempts to bring the co-operative movement in close touch with the Agricultural Department. Co-operation has already been successful to a considerable extent in redeeming the chronic indebtedness of the agriculturist, but if the improvement in his economic condition is to be permanent it is essential that he should be prevailed upon to adopt improved methods of production. The Agricultural Department does undertake propagandist work with this object, but its efforts have not proved as successful as they ought to be. A Co-operative Society provides just the effective agency to reach the agriculturists, and in many places societies have been the means of bringing home to the agriculturist the need for improved methods and have been made the centres for the propagandist activities of the Agricultural Department and District Agricultural Associations. As a result, a few societies have been enterprising enough to purchase modern agricultural implements, recommended by the Department and to use the proper manures and the certified varieties of seeds. "Wherever agriculture and co-operation have experienced the assistance which each can derive from association with the other, they are fast developing a truly organic connection." If the reorganisation of Indian agriculture grows apace with the spread of co-operation, there is no doubt that rural India will soon present a happier outlook than it does now.

RECENT GOVERNMENT ACTION.

In July 1914, the Government of India issued a lengthy Resolution on co-operation in India, surveying its progress in the country during the last ten years. Though the Resolution was optimistic in tone, it criticized impartially the drawbacks of this new movement in India. It particularly emphasised the urgency of a proper financial organisation of societies and stated that "the responsibilities introduced by the addition to the co-operative organization of central and provincial banks are of a serious character. To supervise the relations of such institutions with the money market on the one hand, and with their constituent societies on the other, is a task which requires a considerable degree of technical skill, and the administration of the whole co-operative movement in the stages above that of the individual society is a matter which must in the immediate future engage the serious attention of Government and of the people." In October, the Imperial Government appointed a strong Committee under Sir Edward Maclagan to examine whether the movement especially in its higher stages and in its financial aspect was progressing on sound lines and to suggest any measures of improvement which seemed to be required. The enquiry was to be directed primarily to an examination of such matters as the constitution and working of Central and Provincial Banks, the financial connection between the various parts of the co-operative organization, the audit, inspection, and management of all classes of societies, and the utilization of the reserve funds. The scope of the enquiry was, however, in no way rigidly limited by the Government of India, for the Committee could at its discretion consider and make recommendations regarding any important aspect of the co-operative movement. The Committee travelled for four months visiting various centres in the larger provinces of India and examined during this tour 93 witnesses and inspected 135 societies of various kinds. In its report, which was issued in September 1915, the Committee stated that it had not confined its enquiries to the subjects referred to it, for it had to recognise that the financial welfare of the higher stages of the co-operative system was largely based on the soundness of the foundation. At the outset it may be remarked that in view of the present preponderance in the number of agricultural credit societies and the similarity of the general principles which guide all classes of co-operation, the Report deals mainly with the institutions established for providing agricultural credit. In treating of primary societies the report points out the extreme care necessary in the formation of new societies and urges the importance, from the standpoint of efficiency and financial stability, of systematically inculcating the main principles of co-operation. Stress is laid on the encouragement of thrift, and the Committee thinks that every effort should be made to increase the amount of local deposits in societies. It is recommended that the bye-laws of societies should be so framed as to allow the Annual General Meeting to assess and fix every year the total borrowing power of the Committee and the normal maximum borrowing power of each member. The Committee advocates the taking of sureties in all cases and the rigorous exaction of the sureties' liability when necessary and deprecates an extensive use of mortgages. While advocating the full use of the existing law in respect of recoveries from members, it has refused to support the claim put forward for a summary procedure in the execution of decrees and strongly deprecates the use of Government agency for the recovery of debts due to societies. In the opinion of the Committee it is necessary for all co-operative institutions to build up a Reserve Fund in the sense of surplus assets, and to make every effort to accumulate an "owned" capital to supply their working needs and to meet the claims of creditors on liquidation. Stress is laid on the necessity in the case of primary societies which take deposits of providing for themselves either by their own investments or by arrangements with the financing institutions an adequate fluid resource. After satisfying the requirements in this direction, where necessary, primary societies should be left to utilize their surplus assets in their own business. The function of supervising the primary societies devolves, according to the Committee, on the societies and can best be carried out by a staff paid for by the societies and responsible to them as also to their financing institutions. These duties, it is added, can be performed most in conformity with true co-operative methods by the formation of guaranteeing Unions of societies on what is known as the Burma model. These Unions form a link between the financing agencies and the societies and bring the societies together most effectively for the purpose of mutual supervision, assessment of credit and recovery of loans. In the view of the Committee, a guaranteeing Union of some kind is advisable where the financing agency is a Central Bank, and essential in cases where a Bank dealing with a whole province attempts to deal with societies without the intervention of a Central Bank. Central Banks are at present of three classes according as their shareholders are all individuals, all societies, or some individuals and some societies, and while advocating the disappearance of the first class and the ultimate adoption of the second, the Committee believes that for the present the third or mixed form of constitution offers the best advantage. To balance the excesses and deficiencies in Central Banks and to supply them with funds it advocates the foundation at an early date of a co-operative institution at the head of each Province which does not now possess one. These institutions too should in the Committee's opinion have a mixed constitution in which individuals and co-operative Banks should both be represented. In view of the peculiar nature of co-operative finance, the Committee recommends that the period of deposits accepted by co-operative institutions should ordinarily be as long as possible, but that only in very special cases where Central Banks are in a position to secure

debentures on immoveable property should capital be raised by debentures. The necessity for building up an owned capital is emphasised as also the special necessity for central financing institutions to equilibrate their finances. The Committee comments on the absence of facilities for discounting co-operative paper and on the urgency, under the circumstances, of Central Banks maintaining fluid resources sufficient to meet half the deposits due for repayment within the next twelve months, a standard of one-third being sufficient in the case of Provincial Banks. As in the case of primary societies, central institutions too may after satisfying the requirements in this respect be left to utilize their surplus assets in their own business. The Committee recognizes that its recommendations regarding the fluid resource will entail a disarrangement of existing financial conditions and will in many cases involve a considerable raising of existing margins between the borrowing and lending rates. The Committee insists on the vital importance of proper audit and supervision. In the case of Central and Provincial Banks the audit of accounts should be done on payment either by professional or Government agency, the Registrar being responsible for the inspection and general supervision of these societies. For primary societies, the Committee thinks that the auditing staff may be divided into two sections (*a*) a staff maintained by Government for super-audit and (*b*) a staff maintained by co-operative institutions for original audit. The only prominent administrative concession recommended by the Committee is the introduction of a special procedure for recovery in liquidation. And another concession which may be much availed of if adopted is the suggestion that where loans under the Agriculturists' Loans or the Land Improvement Loans Act are being given by Government on a large scale it should be open to societies to receive such loans for distribution to their members. The Committee recognizes that with the growth of co-operation a new factor in district administration has come into being and therefore desires that the District Officer be entitled to attend all meetings of Central Banks in his jurisdiction though it deprecates the devolution to the District Officer of duties assigned under the Act to the Registrar, or any general arrangement for making him an ex-officio Chairman of the Central Bank at District Headquarters. The Committee recommends that two controlling officers should be employed in each province and that there should be a Registrar or Joint Registrar for every 1,000 or fraction of 1,000 societies registered. The Registrar should be a whole time officer and his post should be included as a Collector's post in the cadre of the Province, the special qualification for the post being that he should be well-versed in co-operative literature relating to all countries and should, if possible, have gained some personal experience of the subject in Europe. The Committee has examined a proposal for the co-ordination of certain economic departments including those of Co-operation, Agriculture and Industries under a single officer of high standing in each Province and has recommended that a move be made in this direction as opportunity offers. The need for closer control by Government over the objects for which the co-operative organization is utilized and over the financial arrangements of the movement is emphasised and to meet the latter it is suggested that an officer with co-operative experience be appointed to act as Adviser to the Local and Supreme Governments. The Committee has finally examined the effect on the co-operative movement of recent famines, of banking crises, and of the present war, and states that the Government has hitherto given direct financial aid to co-operation in three ways, only, *viz.*, (1) by the grant of initial advances to new societies, (2) by guaranteeing the interest on the debentures of the Bombay Central Bank and (3) by special advances in two Provinces to meet difficulties anticipated in connection with the war. The Committee expresses its concurrence with the present policy of Government so far as it represents a rejection of the system of money doles and of undue concessions, but points out that in order to make the movement self sufficing it will be necessary to provide some means of rediscounting the pro-notes of societies either through the Presidency Banks or by means of a State Co-operative Bank and recommend that a careful examination be made of this question. The recommendations of the Committee are under consideration by Government. The minor recommendations made have already been given effect to, but the opinions of the Local Governments were invited on the important ones. These opinions were published by the Government of India in September 1917 in response to a demand in the Imperial Legislative Council. The Government of India has not passed orders on the recommendations in the light of the opinions of the Local Governments. The views of the Local Government differ very widely and clearly showed that a uniform system cannot be introduced in provinces with diverse conditions. The prescribed standard of fluid resources is condemned by some provinces, others object to the use of the Reserve Funds by Societies in their own business, and a majority disapprove of the proposed appointment of an expert co-operator with the Government of India. While practically all approve of a summary process of recovery for the dues of members of Societies in liquidation. Several provinces have already decided to take action on such of the recommendations as are approved of by the Registrars and are suitable to local conditions.

It is hardly possible to appreciate the effec of the co-operative movement in enabling the agriculturists to resist the rigours of a famine as also to judge the reaction of the latter on the co-operative organisation. For, after the introduction of the co-operative movement in India, the country has not been affected by any widespread famines like those through which the greater portion of the country passed in 1898-1900. There has, however, been severe scarcity in Bombay and the United Provinces, but in neither of the two Provinces was the distress sufficiently crushing or widespread to render the assistance provided by the Societies inadequate for the needs of members. With a better appreciation of the dependence of the agriculturist on seasons, and a more

systematic management of the funds of Central Societies it is anticipated that in future the situation arising out of a failure of rains will be satisfactorily met. In 1913 and the following months practically the whole of the country was subjected to a banking crisis of considerable magnitude, but a marked feature of this crisis was a tendency to withdraw deposits from non-co-operative institutions and place them n co-operative banks. The outbreak of the War brought another set of influences into play and there was a temporary tendency to withdraw deposits and a temporary cessation of new deposits. The disturbance was not serious except in two or three provinces and by the end of the year 1914-15 the situation became practically normal. In two of the Provinces where the situation caused some anxiety owing to the cessation of fresh deposits in Central Banks, the Government sanctioned advances to the extent of Rs. 5,00,000 to Central Societies to be utilized in case of urgent loans to agricultural societies or to meet withdrawals of deposits. Of the sum advanced, namely, Rs. 2,55,000, before the close of the year Rs. 1,12,000 were repaid in one province, and Rs. 20,000 out of Rs. 32,000 advanced in another. On the whole, therefore, the movement appears to have stood the test of the War much better than might have been expected. While therefore the co-operative movement has as a whole been the cause of little or no anxiety to the public as well as to the State Co-operative institutions in several provinces have borne their share of the burden of the War to the best of their ability. In the Panjab a War Hospital is maintained by Co-operative Societies in one district and Societies in all parts of the province have contributed largely to various War funds and charities. In two or three other provinces also similar contributions have been made by Societies. In Bombay all classes of Societies readily subscribed to the War Loan of 1917 and 375 Societies have contributed Rs. 4,53,000 before June 1917. Large subscriptions to the War Loan were made also in Bengal, the Central Provinces and the United Provinces.

Defective Education.—It is the experience of those who have to deal with the organisation and management of rural societies that the sad state of education among the agricultural population is not only a real hindrance to the development of co-operation but seriously endangers its very existence. There are villages where no schools exist and where there is hardly one individual who can read and write tolerably well. In most villages a few literate people can be found and it is these that form the nuclei of co-operative societies. Their ignorance in other matters is often so abyssmal that it is hardly possible to instil into their minds even elementary notions of co-operation. Happily there are villages which are better off, where a decent percentage of the population is able to read and write and where one finds a dozen intilligent men who can understand the elements of co-operation. In a large number of societies, as has been pointed out previously, the secretaries who are the real managers are not *bona fide* members. This, it may be urged, is contrary to a fundamental principle of co-operation that there should be internal management of the business, but it can scarcely be helped in a country where there are only a few among the total village population able to keep their own accounts much less to undertake the management of a society. It is true that co-operation provides a higher type of education, but when the ground work itself is lacking it is impossible to build up the superstructure.

Social Reform.—Co-operation has, in some places, stimulated the desire for education and members of rural societies have been known even at advanced ages to receive the elements of education to enable them to put their signatures on the society's papers, and to take a lively interest in the internal work of their societies. There are a few cases where a society has set its face against drunkenness, expelled members notorious for their intemperate habits and has in other ways worked for a better morality by insisting on a high standard of life. Societies have occasionally condemned excessive and even heavy expenditure on marriages, and have thus indirectly trained members to the habit of thrift. Liquidation of old debts again has been rendered possible to a great extent and many an agriculturist who was formerly in a state of chronic indebtedness has been relieved of all his debts and freed from the necessity of incurring new ones. Credit has been much cheapened and it is now possible for the agriculturist to borrow at 9 to 18 per cent. what he could not borrow at less than 20 to 75 per cent. formerly. It has been calculated that in interest alone the agriculturists of India, by taking loans from co-operative credit societies instead of from the village money-lenders, are even now saving themselves from an unnecessary burden of at least 20 lakhs of rupees. The village rates of interest have naturally gone down considerably and the Sowkar is, in most places not the terror and the force that he was. Business habits have been inculcated with the beneficial result that the agriculturist has learnt to conduct his own work more efficiently. Thrift has been encouraged and the value of savings better appreciated. Participation in the management of societies has brought home to the members the important lessons of self-help and self-reliance ; but the most important achievement of co-operation has been the instilling of a sense of communal life—a feeling of "all for each and each for all" amongst the members of a co-operative body. If these signs become as common as they are now rare, and if, over and above the economic benefits achieved by it, co-operation succeeds in its true aim—*the* building up of the character of the people and the promotion of their welfare by the inculcation of the ideas of thrift and the principles of self-help, and, above all, by showing the wisdom of mutual help and brotherliness amongst the neighbours—resuscitation of rural life conducive to more quickened national progress will not be far off.

The Women's Medical Service for India.

This Service which was recently inaugurated under the auspices of the late Lady Hardinge, it included in the National Association for supplying female medical aid to the Women of India, generally known as the Countess of the Dufferin's Funds and is administered by the Central Committee of that Fund. The Government of India has so far allotted the sum of £10,000 per annum towards its maintenance. The present sanctioned cadre is twenty-five first class medical women, of which number five is for the purpose of forming a leave reserve. Recruitment of the service is made (*a*) in India by a medical sub-committee of the Central Committee which includes the Director-General, Indian Medical Service, the Honorary Secretary to the Central Committee, and a first-class medical woman; (*b*) in England, by a sub-committee, consisting of a medical man and two medical women conversant with conditions in India, to be nominated by the Home Committee of the Countess of Dufferin's Fund. These sub-committees perform the duties of a medical board examining candidates for physical fitness, and for return to duty after invaliding.

The Central Committee determines what proportions of the members of the Service is to be recruited in England and in India respectively. In the original constitution of the Service, duly qualified medical women who are in the service of, or who have rendered approved service to, the Countess of Dufferin's Fund, are to have the first claim to appointment, and thereafter special consideration is to be paid to the claims of candidates who have qualified in local institutions and of those who are natives of India.

Qualifications.—The qualifications are that the candidate must be (*a*) a British Subject resident in the United Kingdom or in a British Colony or in British India, or a person resident in any territory of any Native Prince or Chief under the suzerainty of His Majesty exercised through the Governor-General of India or through any Governor or other officer subordinate to the Governor-General of India. (*b*) Must be between the ages of twenty-four and thirty at entry. (*c*) She must be a first-class Medical Woman, *i.e.*, she must possess a medical qualification registerable in the United Kingdom under the Medical Act, or an Indian or Colonial qualification other than L.M.&S. or Licentiate of a Medical College. In India registerable in the United Kingdom under that Act: but this condition does not apply at the original constitution of the Service to medical women in charge of hospitals who, in the opinion of the Central Committee, are of proved experience and ability. (*d*) The candidate *must* produce a certificate of health and character. But the Central Committee reserves the power to promote to the service ladies not possessing the above qualifications, but who have shown marked capacity. Members of the Service are required to engage for duty anywhere in India or Burma. Those recruited in England serve for six months, and those recruited in India for three months, in a General Hospital of the Province to which they are deputed. After this period of probation has been satisfactorily passed their appointments are confirmed. The services of Members may be lent to Local or Municipal bodies, or to special institutions, which may be responsible for whole or part of the pay.

Pay.—The rates of pay are as follows:—During probation Rs. 350 per month: thereafter Rs. 400 up to the end of the 4th year: Rs. 450 from the 5th to the 7th year: Rs. 500 from the 8th to the 10th year: and Rs. 550 after the 10th year. But no member can be confirmed in the 400 rupee grade unless she has passed an examination in such vernacular as the Provincial Committee shall prescribe, within one year of her appointment. In addition suitable quarters are provided free of rent: or a house rent allowance to be determined by the Provincial Committee may be granted in lieu of it.

Members of the Service are permitted to engage in private practice provided it does not interfere with their official duties, and the Provincial Committee has the power to determine whether such duties are thus interfered with. Except in very special cases retirement is compulsory at the age of forty-eight. A member whose appointment is not confirmed, or who is dismissed, is granted an allowance sufficient to pay her passage to England.

Leave Rules.—(*a*) Casual Leave, which is occasional leave on full pay for a few days, and is not supposed to interrupt duty. (*b*) Privilege Leave, which is leave on full pay and is meant to provide a month's holiday in the year. If it cannot be granted during the year, it can be accumulated up to a limit of three months. (*c*) Furlough, at the rate of two months for each year of duty, the latter including privilege leave and casual leave. First furlough is not granted till after four years of duty, and more than eight months furlough is not granted at one time. Study leave may also be granted not exceeding three months at a time and up to nine months during the whole service. (*d*) Sick leave, up to a maximum of two years. (*e*) Extraordinary leave at any time at the discretion of the Central Committee. When on furlough or sick leave the allowances are half the average monthly pay of the six months presence on duty immediately preceding the taking of the leave. There are no allowances during extraordinary leave. A Lady appointed in England receives a sum of £70 to cover her passage and incidental expenses. There are also allowances to cover the cost of journeys by rail and road.

There is also to be a Provident Fund, each member contributing monthly thereto five per cent. of her salary, the Association contributing an equal amount, and each subscriber's account being granted interest on the amount standing to credit at the rate of 4 per cent. per annum, "or at such rate as the Central Committee can invest without risk to the funds of the Association."

The Member loses her contributions if she resign (except on account of ill-health) before completing five years' service, or in the event

of dismissal. On retirement after approved service the sum which has accumulated to the credit of the subscriber is handed over to her.

Lady Hardinge Medical College.—On February 17, 1916, a medical college for women was opened in Imperial Delhi. The scheme for this College was initiated by the late Lady Hardinge. She took a very keen interest in its development and it is due to her efforts that the greater part of the 22 lakhs needed for its completion was obtained in subscriptions from Indian Princes and Chiefs.

The object of the institution is the training of Indian girls of good class to become doctors. The College and hospital will be staffed entirely by women of good professional requirements and will be chosen from the Women's Medical Service members.

Students joining the college will be required to have passed either the Intermediate Arts or Science Examination of one of the Indian Universities. The College curriculum will include courses in Chemistry, Biology and Physics. University graduates from England have been appointed as Professors of these subjects. A certain number of scholarships will be awarded annually to deserving students.

The Lady Hardinge Training School for Nurses.—Attached to the Hospital which is designed to hold 168 beds will be a training school for nurses and midwives. It is intended to train Indian girls as nurses, who will be available for nursing in private families as well as in hospitals.

The following staff has been selected: Principal and Professor of Medicine, Dr. K. A. Platt, M.D., B.S., (London). Professor of Midwifery and Gynæcology, Miss Holton, M.B., B.S. (London). Professor of Pathology, Miss Field, M.R.C.S., L.R.C.P. Professor of Anatomy, Miss Murphy, M.B. (Calcutta), M.R.C.P. and L.R.C.P. Professor of Physics and Chemistry, Miss A. M. Bain, M.A., B.Sc. (Aberdeen). Professor of Biology and Physiology, Miss M. R. Holmer; (First Class in the Natural Tripos, Cambridge). Superintendent of Nursing, Miss Mackenzie. Tuition began in September.

THE COUNTESS OF DUFFERIN'S FUND.

The National Association for supplying female medical aid to the women of India at once one of the most efficient as it is among the most useful and benevolent institutions in India, is the outcome of the work of the Countess of Dufferin and Ava during the time of her husband's Viceroyalty. The late Queen Victoria drew the attention of the Countess, on the departure of the latter for India, to the question of supplying medical aid to women in this country, and asked her to take a practical interest in the subject. As the result of her enquiries she found that, though certain great efforts were being made in a few places to provide female attendance in hospitals, training schools, and dispensaries for women, and although missionary effort had done much, and had indeed for many years been sending out pioneers into the field, yet taking India as a whole, its women, owing to the "purdah" system, were undoubtedly without that medical aid which European women were accustomed to consider as absolutely necessary. In the Countess' own words written in 1886 after the movement had been started: "I found that even in cases where nature, if left to herself, would be the best doctor, the ignorant practice of the so-called midwife led to infinite mischief, which might often be characterised as abominably cruel. It seemed to me, then, that if only the people of India could be made to realise that their women have to bear more than their necessary share of human suffering, and that it rests with the men of this country and with the women of other nationalities to relieve them of that unnecessary burden, then surely the men would put their shoulders to the wheel and would determine that wives, mothers and sisters, and daughters dependent upon them should, in times of sickness and pain, have every relief that human skill and tender nursing could afford them.....I thought that if an association could be formed which should set before itself this one single object, to bring medical knowledge and medical relief to the women of India, and which should carefully avoid compromising the simplicity of its aim by keeping clear of all controversial subjects and by working in a strictly unsectarian spirit, then it might become national, and ought to command the support and sympathy of every one in the country who has women dependent upon him."

Initiation of the Scheme.—Lady Dufferin's plans were warmly received by the public all over India. The scheme was drawn out and published in the different dialects. The association was named "The National Association for Supplying Female Medical Aid to the Women of India," and the money for its support, as it was received, was credited to the "Countess of Dufferin's Fund." The affairs of the Association were managed by a central committee of which the Countess of Dufferin during her stay in India was President. Branch Associations, each independent for financial and administrative purposes, but linked with the central committee, were formed in most parts of the country, and the work may be said to have started from August 1885. The objects of the Association are thus set-forth in its publications.—I. Medical tuition, including the teaching and training in India of women as doctors, hospital assistants, nurses, and midwives. II. Medical relief, including the establishing under female superintendence, of dispensaries and hospitals for the treatment of women and children; the opening of female wards under women superintendents in the existing hospitals and dispensaries; the provision of female medical officers and attendants for existing female wards; and the founding of hospitals for women where specially

funds or endowments are forthcoming. III. The supply of trained female nurses and midwives for women, and nurses for children in hospitals and private houses.

Within four years from its inception there were in existence twelve hospitals for women and fifteen dispensaries, most of which were officered by women, and all more or less closely connected with the Association. From the subscriptions collected there was enough to set aside a substantial sum as an endowment fund; and also six medical, twelve nursing and two hospital assistant scholarships had been provided for.

Growth of Scheme.—The first regular training school in India for the instruction of native pupils in medical and surgical nursing, and in midwifery was established in 1886 by the Bombay Branch of the Association in connection with the Cama Hospital in Bombay. This is a civil institution under Government management, and is solely for women and children of all castes and denominations. In connection therewith is the Albless Obstetrical Hospital and the Jaffer Suleiman Dispensary for women and children. The present physician-in-charge is Miss A. M. Benson, M.D., (Lond).

There are thirteen Provincial Branches working under the central committee; and attached in some manner, or affiliated to the provincial branches, there are about one hundred and forty Local and District Associations or Committees engaged in furthering the work of the Association. There are one hundred and fifty-eight hospitals, wards, or dispensaries of various kinds for the medical relief of close on one and a quarter million women and children; and the value of the institutions engaged in the work of the Association was estimated at over 56 lakhs of rupees.

Annual Report.—The Report of the Association is published annually, and can be obtained either from the Superintendent of Government Printing, Calcutta, or from the leading booksellers, the price being one rupee. The map of India published therewith shows the centres worked by the Dufferin Fund uniformly scattered over the Indian Peninsula, and illustrates how the Association has taken root in the country. The Honorary Secretary is Lt.-Col. Sir James Roberts, I.M.S.

NURSING.

Whilst India cannot show the complete chain of efficiently-nursed hospitals which exists in England, there has been a great development of skilled nursing of recent years. This activity is principally centred in the Bengal, Madras, and Bombay Presidencies, where the chief hospitals in the Presidency towns are well nursed, and where large private staffs are maintained, available to the general public on payment of a prescribed scale of fees. These hospitals also act as training institutions, and turn out a yearly supply of fully trained nurses, both to meet their own demands and those of outside institutions and private agencies. In this way the supply of trained nurses, English, Anglo-Indian and Indian, is being steadily increased. In Bombay the organisation has gone a step farther, through the establishment of the Bombay Presidency Nursing Association, c/o St. George's Hospital, Bombay. This is composed of representatives of the various Nursing Associations in charge of individual hospitals, and works under the Government. The principle on which the relations of this Association with the Local Associations is governed is that there shall be central examination and control combined with complete individual autonomy in administration.

Nursing Bodies.—The Honorary Secretary of the Calcutta Nursing Association is Mr. R. A. B. Reynolds, the Presidency General Hospital. The address of the Mayo Hospital Nursing Association is in Strand Road. In **Madras** there is the General Hospital, with a staff of 62 nurses, the Government Maternity Hospital, the Caste and Gosha Hospital at Kilpauk, the Royappeta Hospital and the Ophthalmic Hospital.

Bombay Presidency.—The Bombay Presidency was amongst the first in India to realise the value of nursing in connection with hospital work. The first steps were taken on the initiative of Mr. L. R. W. Forrest at St. George's Hospital, Bombay, where a regular nursing cadre for the hospital was established together with a small staff of nurses for private cases. This was followed by a similar movement at the J. J. and Allied Hospitals and afterwards spread to other hospitals in the Presidency. Ultimately, the Government laid down a definite principle with regard to the financial aid which they would give to such institutions, agreeing to contribute a sum equal to that raised from private sources. Afterwards, as the work grew, it was decided by Government that each nursing association attached to a hospital should have a definite constitution, and consequently these bodies have all been registered as Associations under Act 21 of 1860. By degrees substantial endowments have been built up, although the Associations are still largely dependent upon annual subscriptions towards the maintenance of their work. The chief of these Associations are:—

St. George's Hospital Nursing Association. Secretary: D. W. Wilson, St. George's Hospital, Bombay.

J. J. Hospital Nursing Association. Secretary: A. G. Gray, Jamsetji Jijibhai Hospital, Bombay.

Gokaldas Tejpal Hospital Nursing Association. Secretary: Rahimtullah Currimbhoy.

Cama Hospital Nursing Association. Hon. Secretary: H. Macnaghten, Esq. Address—Cama Hospital, Bombay.

Sassoon Hospital Nursing Association.
Address—Sassoon Hospital, Poona.

Ahmedabad and Lely Memorial Association.
Address—Civil Surgeon, Ahmedabad.

After further experience it was felt that it is undesirable to have a considerable number of detached and independent nursing associations, training and certifying nurses, without any common standard of entrance, examination, or certification. It was therefore decided to establish the Bombay Presidency Nursing Association which came into existence in the year 1910. This is an Association formed partly of representatives of all affiliated associations and partly of direct representatives of Government, the Surgeon-General with the Government of Bombay always being the chairman. It is financed partly from the product of endowments and partly from contributions from the Government of India. If subsequently further funds are needed they are to be provided by contributions from the affiliated Associations.

The principle on which the Bombay Presidency Nursing Association works is a central system of examination, certification, registration and control. It is now the only nursing, examining, registering and certifying body in the Bombay Presidency. At the same time, the local associations retain entire charge of their local funds excepting Provident funds which have been transferred to the Central fund, and also entire control of the nurses when they are in their employment. In a sentence, the principle is central examination and certification and local control. By degrees it is hoped to be able to establish the principle that none but nurses registered under or certified by this association shall be employed in any Government institution.

The Association commenced its operations on the 1st April 1911. The institutions recognized under the by-laws for the training of nurses at present are—St. George's Hospital, J. J. Hospital, Cama and Allbless Hospitals in Bombay, the Civil Hospital, Karachi, the H. and P. Civil Hospital, Ahmedabad, and the Sassoon Hospital in Poona, and the following for the training of midwives:—The Cama and Allbless Hospitals, St. George's Hospital and the Bai Motlibai Hospital in Bombay, and the Sassoon Hospital in Poona.

Provision for retiring allowances is made for all members on the basis of a Provident fund and a Nursing Reserve has been established for employment in emergencies such as war, pestilence or public danger or calamity.

Address—The Secretary, Bombay Presidency Nursing Association, c/o Greaves Cotton & Co., Bombay.

Lady Minto Nursing Service.—In 1905, there was one organisation existing in the Punjab and the United Provinces called the Up-Country Nursing Association for Europeans in India, which was established in 1892. This Association carried out very useful work in certain parts of India, but was hampered by want of funds. For this reason it was found impossible to extend their organization and the urgent need for a larger number of trained nurses at charges within the reach of all classes was much required. The late Lady Curzon worked energetically to provide an enlarged nursing organization, but principally for financial reasons, was unable before leaving India to bring her scheme to fruition. The Home Committee of the existing Association recognizing the need of expansion approached Lady Minto before she left England in 1905 and begged her assistance and co-operation. After much consideration and discussion with the Government of India, Lieutenant-Governors and Commissioners of Provinces, the present Association was established. In 1906 an appeal was made by Lady Minto to the public both in England and India to start an endowment fund. This appeal was most generously responded to. Each year the endowment fund has gradually increased, and with the assistance of a Government grant, homes for nurses have been established in seven Provinces of India and Burma, of which the original Association formed the nucleus. To avoid confusion with other Associations, the enlarged organisation, by request of the Home Committee, was named "Lady Minto's Indian Nursing Association," carrying on the same work as before, namely, that of selecting suitably trained nurses in England, and making the necessary arrangements for their transfer to India. Hon. Secretary, Lieut.-Col. Sir J.R. Roberts, C.I.E., I.M.S., Simla; Hon. Secretary, Home Branch, Lieut.-Col. Sir Warren Crooke-Lawless, Kilcrone, Cloyne, Co. Cork.

Nurses' Organizations.—The Trained Nurses' Association of India and the Association of Nursing Superintendents of India are not Associations to employ or to supply nurses, but are organizations with a membership wholly of nurses with the avowed objects of improving and unifying nursing education, promoting *esprit de corps* among nurses, and upholding the dignity and honour of the nursing profession. The Associations have a membership of 202, including nurses trained in ten or more different countries, Europeans, Americans, New Zealanders, Australians and Indians. The Association of Superintendents was started in 1905 as the Association of Nursing Superintendents of the United Provinces and the Punjab, but by the next year its membership had spread over the country to such an extent that the name was changed to include the whole of India. The Trained Nurses' Association was started in 1908, and a monthly Journal of Nursing began to be published by the two Associations in February, 1910. The Associations have since become affiliated with the International Council of Nurses.

Below are given names of Officers of the Associations:—

Trained Nurses' Association of India.

President, Miss Bartleet, Peach Cottage, Coonoor. *Hon. Secretary and Treasurer*, Miss Thacker, Cama Hospital, Bombay.

Association of Nursing Superintendents.

President, Miss Dent, Madras; *Hon. Secretary and Treasurer*, Mrs. Blackaby, South Ville, Colaba.

Indians Abroad.

The Indian is naturally averse from emigration beyond the seas. Nevertheless there are some hundreds of thousands of Indians resident in other lands as labourers, shopkeepers or professional men. Their total number relatively to the population of the Indian Empi e is very small being something under two million. In itself, however, it is considerable; and it acquires an extrinsic importance from the social and political issues involved in the settlement of Indians, either as indentured labourers in Crown Colonies, or as free residents in self-governing countries.

The right to migrate.—From the Imperial standpoint the case of Indian migration to the self-governing Colonies is much the more important, and for a time the problems arising therefrom became acute. There were two centres of difficulty—South Africa and British Columbia. In each country the situation involved particular local problems of extreme difficulty. But before passing to a discussion of them it is necessary to refer to the larger question of the right of migration within the Empire. The intense feeling aroused in India by the disabilities suffered by Indians in the two countries named was primarily due to the belief that Indians were being denied the common rights of British citizenship. Without attempting to define the term "British citizenship," which is not so easily susceptible of definition as may be imagined, it must suffice to observe that unrestricted migration within the Empire does not appear to be the common right of His Majesty's subjects. The laws of the Dominion of Canada and the Commonwealth of Australia confer powers of exclusion of would-be immigrants hailing from any part of the Empire. These laws have been enforced against Englishmen on various grounds. The ground of exclusion is usually economic, and it is on that ground that the Colonial objection to unrestricted immigration from India operates. It is unfortunately inevitable that the problem assumes in the popular mind a racial complexion. But in actual experience it is the clash of economic interests and the possible political difficulties involved in the settlement of Indians in large numbers in the self-governing Colonies which the statesmen of the Empire have to take into account.

In South Africa the trouble gathered round the disabilities of Indians already settled there. The question of immigration restrictions, though important, held a less prominent place in the agitation. The most acute point of the controversy was the annual £3 head tax in Natal. Restrictions on the migration of Indians from one State of the Union to another was another sore point. The requirement to take out trading licenses was also felt to be a vexatious and invidious distinction between Indian and European traders. While the controversy was at its height, an Act was passed in the Union Parliament, restricting entry into South Africa to the wife or child of a lawful immigrant or resident who was the wife or child of a monogamous marriage. In a case brought before the courts it was decided that the only wife of a marriage solemnised according to the rites of a religion permitting polygamous marriages could not be admitted. The leaders of the agitation in South Africa adopted passive resistance tactics, which brought large bodies of Indian workmen in Natal into conflict with the police. The situation became acute, and a strong demand arose in India for the appointment of a Government Commission to enquire into the whole question. The Union Government appointed a Commission, and invited the Government of India to send a representative. Sir Benjamin Robertson, Chief Commissioner of the Central Provinces, was selected. The Commission reported on the whole favourably to the Indians.

The **Indians' Relief Act**, 1914, gives effect to those five of the 14 recommendations made by the Commission which necessitated legislation. First by the deletion of certain words from the Immigrants' Regulation Act, 1913, an Indian, married in accordance with the rites of a religion by the tenets whereof polygamy is recognised, is enabled to introduce into the Union one wife as well as her minor children by him, provided the Indian has in the Union no other wife. Another recommendation of the commission to which effect is given is as follows: An Indian man and an Indian woman may, on a joint application to a magistrate or marriage officer, and on complying with certain prescribed formalities, obtain registration of such a union between them as is *de facto* a monogamous union, and such registration will constitute a valid and binding marriage between them with all the incidents thereof, and will be recognised in the Union as such, notwithstanding that, by the tenets of the religion which they profess, polygamous marriages are recognised.

The third recommendation of the Commission to which effect is given is a provision for the appointment of Indian priests as marriage officers under the marriage laws of the several provinces of the Union. So far as Cape Colony is concerned this had been possible, as regards the Mohammedan religion, under Act No. 1 of 1860, while Law No. 19 of 1891 of Natal contained a similar provision. Under the new Act any Indian priest may be appointed a marriage officer for the purpose of the marriage laws of any province of the Union, and a marriage solemnised by him will, if solemnised in accordance with the rites and formularies of his religion and without any prescribed statutory words signifying the binding nature of the ceremony, be recognised as valid.

Another provision provides for the repeal that section of the Natal Indian Immigration Laws which imposed an annual licence of £3 on Indians who, introduced as indentured labourers, failed to reindenture at the termination of their contracts.

In British Columbia, the trouble over Indian immigration came to a head in the early part of 1914, when a ship-load of Indians was despatched direct from the Far East to Vancouver. It was held up in the harbour there for several weeks. The passengers were not allowed to land. An appeal to the Cana-

dian courts resulted in the rejection of their claim, and eventually they were shipped back to India. The arrival of the **Komagata Maru** in Calcutta on September 26, 1914, was the occasion of a most lamentable incident. Anticipating an attempt to organise a political demonstration, the authorities provided special trains to convey the returned immigrants to their homes in the Punjab, and had taken power, under Ordinance V of 1914, to require them to do so; some sixty men immediately proceeded to their homes, but the balance under the leader, Gurdit Singh, endeavoured to force their way to Calcutta. They were turned back by the Military, and whilst arrangements were being made for a second special train, opened fire on the Police and Officials. The Military dispersed the immigrants by fire, and the majority were afterwards arrested. Sergt. Eastwood, Calcutta Police, and Mr. Lomax, of the E. B. S. Railway, were killed; the Punjab Police had one killed and six injured; sixteen rioters were killed, as well as two onlookers. The Government of India appointed a commission under the Presidency of Sir William Vincent to investigate the matter and it took evidence in Calcutta and the Punjab.

There are some 4,000 Indians already settled in British Columbia, chiefly Sikhs. They work as agricultural labourers, in factories and lumber yards, and also on the railways. The desire amongst them to bring their wives and families out from India points to the fact that they are fairly prosperous and find the conditions of life in the Colony agreeable. The attitude of the Colonial authorities towards them is governed by the general objection to Asiatic immigration. It is felt that the unrestricted entry of Asiatics would threaten the existence of British Columbia as a "White man's country." The immigration of Japanese and Chinese is regulated by special treaties with their Governments. The number of Japanese is limited to a few hundreds annually. Chinese immigrants pay a head tax of 500 dollars on entry.

An exaggerated danger.—Making every allowance for the Colonial standpoint, those acquainted with the internal condition of India cannot but feel that the fears that the self-governing colonies may be deluged by Indian immigration are greatly exaggerated. The total number of Indians resident out of India is under two millions, and of these the majority are to be found in tropical countries. Ceylon alone has 900,000 of them. There is a quarter of a million in Mauritius, about another quarter of a million in British Guiana and the West Indies, and 230,000 in the Straits Settlements and Malay States. Of the self-governing Colonies South Africa has by far the largest share, her Indian population being a little under 160,000, Natal alone accounting for 133,000. But this is not the result of ordinary migration. The nucleus of the South African Indian community was formed artificially by Natal herself. Until 1911, when it was stopped by the Government of India, there was for many years a steady stream of indentured immigration into Natal to supply labour to the sugar and other industries of that colony. The natural increase of the Indian population in South Africa is now much larger than the increase by immigration. In the whole Australian Commonwealth there are not more than 7,000 Indians. The Dominion of Canada has 4,500 in all. The significance of these trifling totals must be viewed in the light of the conditions prevailing in India. Here, it is true, there is a vast population. Were these 300 millions subjected to the economic conditions of Europe, and were they imbued by the adventurous and ambitious spirit of Europeans, there would be good ground for alarm in the Colonies at the possibility of an overwhelming influx of Indians. But those are precisely the conditions that do not obtain in the Indian Empire. The demand for labour in India is always greatly in excess of the supply. The tea-planters of Assam are obliged to compete with the Crown Colonies in an elaborate system of cooly recruitment. Labour-shortage is a chronic difficulty with the cotton mills of Bombay. As industrial expansion proceeds and agricultural methods improve, as more land is brought under cultivation, there must be a diminishing likelihood of emigration from India on any large scale. Add to this the inherent reluctance of the Indian to go far from home, and it will be apparent that the danger of "white men's countries" being swamped by Indian immigrants is at the least remote. It is never likely to assume such proportions as would pass the wit of statesmen to control.

Indentured Emigration.—The institution of indentured labour in the tropical colonies of the Empire is one of long-standing. As far back as 1864 indentured emigration from India to the British West Indies was in progress under Government control. In the case of several of the tropical colonies there has been no interruption since then in the steady inflow of several thousands of Indian labourers annually. In Mauritius, the Straits Settlements, the Federated Malay States and Natal the system for various reasons has come to an end; but in all those countries there is now a large population of Indians, permanent or temporary, engaged as free labourers or in independent positions. The principal colonies in which indentured emigration still prevails are British Guiana, Trinidad and Fiji. Even here, however, there has been a progressive decline during recent years, owing in part to the increased difficulty of recruiting in India. This difficulty arises entirely from the growing demand for labour within the Indian Empire, consequent upon industrial expansion.

The indentured system has been the subject of much controversy. It is disliked in India and by some people in England, because it seems to present features analogous to slavery—in that for the term of his indenture the labourer is not a free agent; he is *ad scriptus glebae*, and bound to serve the employer to whom he is assigned on terms which are absolutely fixed. In the colonies themselves the system is unpopular on two grounds—(1) it tends to depress the current rate of wages, (2) only a minority of the time-expired coolies become permanent settlers, the majority claiming their return passage and taking money out of the colony in the form of savings. From the point of view of the labourer himself, the indentured system, if it has any true resem-

blance to slavery, is a kind of bondage that is easily supportable. He is supplied with a free dwelling under highly sanitary conditions, his wages are fixed on the basis of the rate prevailing in the open market; no deductions are to be made therefrom for rent, hospital accommodation, medical attendance or medicine, which the estate proprietors are bound to provide. Free schooling is available for his children; and if, at the end of his indenture, he elects to remain in the Colony he is given a free grant of Government land. These are the conditions prevailing in British Guiana; but, with the exception of the grant of land they are similar to those in other colonies where indentured immigration is in force. The permanent Indian population in British Guiana is 127,000; in Trinidad 113,000, in Fiji 40,000, in Mauritius 258,000 and 113,000 in Natal. Other colonies, such as Jamaica and Dutch Guiana (Surinam) have small communities, amounting in each to a few thousand only of time-expired Indian coolies. Ceylon, the Straits Settlements and the Federated Malay States continue to attract Indian labourers, chiefly from Southern India, although no indenture system now exists in those countries.

The method of recruiting indentured coolies was fully described in the 1916 edition of the Indian Year Book, pp. 467-8.

Indians in the Colonies.—Statement shewing approximately the number of British Indian subjects in the various colonies.—

Trinidad	117,100
British Guiana ..	129,389
Jamaica	20,000
Fiji	44,220
Surinam	26,919
Reunion	3,012
Mauritius	257,697
Federated Malay States ..	210,000
Straits Settlements ..	..Figures not available.
Cape Colony	6,606
Natal	133,031
Transvaal	10,048
Orange Free State	106
Southern Rhodesia ..	..Figures not available.
Australia	Do.
New Zealand	Do.
Canada	..2,500 or 4,500 (the number is uncertain).

Commission of Inquiry Appointed.—About the end of 1912, the Government of India appointed a Commission of two, Mr. J. McNeill and Mr. Chiman Lal, to report upon the conditions of life of the Indian immigrants in the Colonies. The Commissioners were also desired to submit recommendations as to any arrangements which may be considered desirable to promote their welfare. The main points to which they were to direct attention were: the housing of the labourers and the sanitary conditions in which they live; the adequacy of medical arrangements; whether tasks are moderate, hours of work suitable and wages adequate; whether the administration of justice is fairly conducted and whether labourers meet with any difficulties in prosecuting employers or defending themselves; whether the penalties imposed by the labour laws are in any case excessive or unsuitable; whether the labourers are subjected to undue restrictions, outside working hours, and whether they enjoy sufficient facilities for proceeding to the Protector of Immigrants or to the Magistrate to lodge complaints; the relations generally between employers and labourers; whether facilities are afforded to Indian labourers in social and religious matters; and whether repatriations are promptly made and whether immigrants experience any difficulty in obtaining repatriation. They were desired to report specially in respect of certain features of the system. These were connected with any excessive number of prosecutions of labourers by employers, the position of the Protector of Immigrants, the terms of agreement which the emigrant is required to sign; the position of free Indians, female indenture, and suicides and immorality on the estates.

Merits of the system.—The Commissioners were engaged in their investigation for about 11 months. They visited Trinidad, British Guiana, Jamaica and Fiji, and also the Dutch Colony of Surinam which is permitted to recruit labourers under contract of indenture in India. Their report is in two parts, Trinidad and British Guiana taking up the first, and the rest the second part. After a detailed exposition of the state of things in respect of the points mentioned above in each of the colonies visited by them, the Commissioners observe: "We are convinced that notwithstanding our possibly disproportionate presentation of the unsatisfactory features of the existing system, a careful study of the facts elicited during our inquiry will result in the conclusion that its advantages have far outweighed its disadvantages. The great majority of emigrants exchanged grinding poverty with practically no hope of betterment for a condition varying from simple but secure comfort to solid prosperity. Emigrants live under very much better conditions than their relatives in India, and have had opportunities of prospering which exceeded their own wildest hopes. They became citizens of the colonies to which they emigrated and both they and their descendants have attained to positions commanding general respect and consideration." As regards the moral condition of the immigrants, the Commissioners observe: "There is no doubt that the morality of an estate population compares very unfavourably with that of an Indian village, and that the trouble originates in the class of women who emigrate." The **rates of suicide** among the indentured labourers are high as compared with those among free Indians in the colonies, and much higher than those among the population in the provinces of India. In Trinidad the suicide rate for the total Indian population was 134 per million and for the indentured 400 per million. The suicide rates among Indians in the other colonies were: British

Guiana, unindentured, 52 per million, indentured 100 per million; Jamaica, 396 per million, suicides amongst the unindentured not being separately recorded; Dutch Guiana, unindentured, 49, indentured 91; Fiji, unindentured, 147 per million, indentured, 926 per million. According to a statement prepared by the Department of Commerce and Industry of the Government of India, the average suicide rates for India are, the Bombay Presidency 28·8 per million, the United Provinces whence most emigrants are drawn, 63 per million and Madras, the other chief source of supply to Fiji, 45 per million.

Indian Feeling.—For some years past, there has been a growing feeling amongst Indian leaders that the indentured system of labour was inconsistent with national self-respect, and should be stopped. This feeling originated in the belief that the treatment accorded to Indians in the self-governing colonies, especially in South Africa, was due to the Colonials coming to think poorly of Indians as a race because of the class represented by indentured labourers. In 1910, the Government of India accepted a resolution moved by the late Mr. Gokhale putting an end to the indentured system so far as Natal was concerned. In 1912, however, they opposed his resolution to abolish the system altogether. Opinion in India has been ripening fast against the system, and it is reinforced by the rapid industrial development of the country making largely increasing demands on the labour market, depleted to some extent by the ravages of plague during the last twenty years. The startling figures of suicide and the admissions as regards the prevalence of gross immorality among estate populations, have roused public feeling in the country, and this has been accentuated by well-authenticated stories of young caste women of respectability having been decoyed by dishonest recruiting agents to the emigration depots. Mr. C. F. Andrews, late of St. Stephens' College, Delhi, and now connected with the school conducted on his own original lines by Sir Rabindranath Tagore—the poet-laureate of Asia, as the Viceroy aptly called him—at Bolpur in the Bengal Presidency, was deputed by the Indian Citizenship Association of Bombay to visit Fiji and to investigate the conditions which make for the frightful rate of suicide recorded in that colony. He was accompanied by Mr. W. Pearson, who is also associated with the Bolpur School. Messrs. Andrews and Pearson, it may be mentioned, visited South Africa when the Passive Resistance struggle led by Mr. Gandhi was at its height, and rendered valuable service in bringing about the settlement that was eventually arrived at.

Protected Emigration.—In a speech delivered in Council on September 5, 1916, H. E. the Viceroy stated that the Government of India were contemplating the control of the operations of persons engaged in supplying labour to the Colonies. "Labourers," said His Excellency, "have a right to emigrate if they wish, and it would be very unwise and very undesirable on our part to prevent them, and we are, therefore, trying to devise arrangements which will secure that recruitment in this country is conducted under decent conditions, that a proper sex ratio will be maintained and that on arrival in the country of their destination they will be properly treated and allowed to engage themselves on terms at least as free as those obtaining at present in the Malay Peninsula, where a labourer can leave his employer by giving a month's notice. I think it will be clear to all who have studied the question that the Government of India would be departing gravely from its duty if it allowed emigrant labour to leave this country without proper protection and safeguards. There are a certain number of labourers, I believe a very small number, who emigrate as genuine free labourers, that is to say unassisted by pecuniary help and uninvited by any interested agency. But, if we confine ourselves to the abolition of our existing indentured emigration, a position will arise in which the parties interested in procuring Indian labour will be free to induce labour to emigrate by pecuniary help under any conditions they like, so long as the labourer does not go under indenture. The abuses likely to arise out of such a state of things would be very serious. I need only refer to the state of affairs which existed before the amendment of the **Assam Labour and Emigration Act**, in connection with so-called free labour. The consequence of this system was, as Sir Charles Rivaz put it in his speech before the Legislative Council in 1901, that a horde of unlicensed and uncontrolled labour purveyors and recruiters sprang into existence, who under the guise of assisting free emigration made large illicit gains by inducing, under false pretences, ignorant men and women to allow themselves to be conveyed to Assam. These emigrants were, it is true, placed under labour contracts on arriving in that province, but the abuses complained of arose in connection with the recruitment and not with the contract. Similarly when the system of indentured emigration first arose in India the only caution required was that intending emigrants should appear before a magistrate and satisfy him as to their freedom of choice and their knowledge of the conditions they were accepting. It was shown, in a report submitted in 1840, that abuses undoubtedly did exist in connection with recruitment in India, abuses which the constantly increased safeguards provided by successive Acts of the legislature where designed to correct. Uncontrolled recruitment cannot, it is clear, be permitted under any circumstances. Lord Hardinge promised, and I associate myself with him, to deal with certain points. These points were the better supervision of colonial recruiting in India, the insertion of information regarding the penal conditions attaching to labour contracts in the indenture signed by intending emigrants and the undesirability of labourers in the colonies being compelled to do work repellent to their caste ideas and religious beliefs. Regarding the first matter we have already consulted local Governments very fully when asking their views as to the precautions which will be required after the **abolition of indentured emigration.** As to the second point you are no doubt aware that Fiji has now abolished imprisonment for labour offences and other colonies are arranging to follow suit. But there will still be certain provisions remaining which we think should be brought to the notice of intending emigrants and we have arranged to do this as soon as the various colonial legislatures concerned have passed the amendments to which I have alluded."

Indenturing Abolished.—In 1917 the situation underwent a radical change. Whilst no official pronouncement was made, the idea gained popular acceptance that the Secretary of State had proposed that the system of indenturing should be continued for a further period of five years, pending the working out of an alternative system of recruitment. This aroused strong protests throughout the country. Whilst a reasonable desire was manifest not to add to the difficulties of the Government and of the colonies in time of war, it was felt that the continuance of a system open to such grave objections for ten years—five years for recruitment and five years for the new indentures to expire—was too long. Public meetings were held throughout the country. Government solved the difficulty by prohibiting all emigration from India, as a war measure, on account of the shortage of labour; subsequently assurances were given that the system would never be revived. Thus indenturing ended by a side issue, but nevertheless one which was quite definite.

Assisted Emigration.—Subsequently a committee sat in London to consider what form of assisted emigration should take the place of the indentures. Its report was issued about the middle of the year and the chief recommendations are here summarised.

Under this scheme Indian will arrive in the colony entirely free from debt and of any liability for the cost of his introduction. He will be in no sense restricted to service under a particular employer, except that for his own protection, a selected employer will be chosen for him for the first six months. This employer can be changed, with the approval of the protector of Immigrants, if substantial reason can be adduced. From the time of his arrival the immigrant will be given land to cultivate for his own benefit. Each male adult employed in an agricultural industry will be granted for his personal use and cultivation a garden plot of one-tenth of an acre after six months' service and a larger plot of one-third of an acre will be made available whenever practicable by way of reward. At the end of three years' employment under any of the employers on the register steps will be taken to ensure that land is available for settlement in the simplest and cheapest manner. In each colony there will be a department responsible for the provision of sufficient land to meet all *bona fide* applications and for rendering it suitable for agriculture by adequate clearing, irrigation and drainage. These holdings will be up to five acres in extent, they will be subject to a reasonable annual rent in the case of lease-holds, and the settlements will be for a period of thirty years. Under the proposed system the immigrant can be proceeded against only by way of a civil suit in the ordinary course of law and will not be liable to any criminal penalties. A minimum wage will be fixed, subject to periodical revision. During the first twelve months the children under eleven years will be entitled to free rations while children under five will be given a face milk ration during the whole time that their parents remain in the service of an employer on the register. The provision of married quarters separate from the "single" quarters will be made compulsory upon all employers of more than twenty adult Indian immigrants and will be insisted upon so far as possible in the case of all other employers on the register. This register will contain the names of only "approved employers" that is to say of persons desirous of employing assisted emigrants, who have applied to the Protector of Immigrants and who have been found on inquiry to be suitable. Repatriation will be assisted when it is desired. The emigrants will receive for himself and his dependents half the passage money after three years' service and a larger proportion up to the whole cost after seven years' service.

With regard to recruitment, Emigration Agents will be licensed and paid fixed salaries, with possibly additional money grants for meritorious work. Their work will be supervised by Inspectors of Emigration, who will be men of standing on a graded scale of pay. Over them will be an Emigration Commissioner, who will be a Colonial Civil Service official, and a Protector of Immigrants, appointed by each Local Government to supervise emigration in the province affected. In each colony will be a Protector of Immigrants. The Emigration Depots will be visited by non-official gentlemen of standing in the district as also will be the Central Depot. The emigration of whole families will be encouraged but persons below the age of eighteen will be assisted to emigrate only when accompanied by their parents or guardians. Women unaccompanied by their families will not be assisted and the rule requiring a certain proportion of women to men will be abolished.

The report was published at a time when the political energies of India were concentrated on the development of the Indian constitution and the pending visit of the Secretary of State to discuss these questions on the spot. It attracted little attention. So far as opinion was expressed, whilst recognising that the system was an immense advance on the system of indenture, it was thought undesirable for Government to take so large a part in the direction emigration to distant lands.

Indians in Great Britain.

More than sixty years have gone by since the Parsi community, in the persons of the late Dadabhai Naoroji and other members of the firm of Cama & Co., led the way in the sojourn of Indians in England for business purposes. This lead it has since maintained, though there are both Hindu and Mahommedan business men firmly established there. Nor are the professions unrepresented, for there are in London and elsewhere practising barristers, solicitors and medical men of Indian birth. Three Indians are on the Secretary of State's Council, and at least one successful in the Civil Service examination elected to work in England instead of returning to his native land. The early years of the present century saw the gathering of a new Indian element in permanent residence—that of retired officials (particularly of the I. M. S.) and business men, or people of independent means who from preference or in order to have their children educated in England, leave the land of their birth and seldom if ever visit it again. Further, the stream of Indian summer visitors (temporarily almost suspended by the war) includes wealthy people who came regularly as the swallows in spring, and some of them spent as much time in England or on the Continent as in their mother land. Before the transfer of the Indian troops in France (other than the Cavalry Division) to "another scene of operations" towards the end of 1915, thousands of our valiant Indian soldiers, wounded or invalided from Flanders, went to England to be nursed back to health in the well-equipped and admirably administered Indian hospitals, some in Hampshire but chiefly at Brighton where the fact is to be commemorated by a permanent Indian provided memorial.

The Students.

But under normal conditions it is the student community which constitutes the greatly preponderating element and creates an Indian problem. Its numbers multiplied ten or twelvefold in the quarter of a century before the war, the increase being especially rapid after 1904 or 1905. There was indeed an artificial inflation some five years later when many youths (some of them ill prepared) were hurried off to the Inns of Court in order to be entered before the standard of the examinations qualifying for admission was raised. This sudden expansion was duly worked off but there was development in other directions, and particularly that of the technical and engineering schools and classes. Allowing for the very considerable temporary check caused by the European War the aggregate number may be estimated at now under 1,000. This total does not include of the growing number of youths of good family, some of them heirs of Native States, admitted into our public schools, such as Eton and Harrow; nor the younger children of resident Indians. Nor does it comprehend Burmese students of whom there are about 80. Nor does it take full account of female students in schools and colleges. Exact and complete records on these points are not obtainable.

It is, however, with the young men abo 1,000, almost all far removed from parenta oversight and control, that the organization set up by the Secretary of State for India has to deal. Of these on 30th June last 157 were at the Middle Temple, 82 at Lincoln's Inn, 74 at Gray's Inn and 85 at the Inner Temple. Altogether, including technical and medical students, there must be 600 in London. Edinburgh comes next with 100, Cambridge with 98, Oxford with 59, Glasgow with the same number, Dublin (a comparatively new centre) with 50 and Manchester with 19, while there are smaller numbers at Birmingham, Leeds, Sheffield, Liverpool and other centres.

The Advisers.

It is well known that until a few years ago the young Indians, apart from inadequately-supported unofficial effort and the chance of coming under the influence of English friends of their families, were practically left to their own devices. But in April 1909 Lord Morley, as a result of the investigations of an India Office Committee, created for their benefit a Bureau of Information and appointed Mr. T. W. Arnold to the charge of it under the title of Educational Adviser. The Bureau was located in due time at 21, Cromwell Road, together with the National Indian Association and the Northbrook Society, which were thus given spacious quarters for their social work among the young men, without incurring what would otherwise have been the prohibitive cost of heavy rent. Lord Morley also established an Advisory Committee, mainly composed of influential Indian residents, but which has now ceased to exist, and in India corresponding provincial committees were formed to help and advise intending students. The work of the Bureau rapidly expanded, and in consequence Lord Crewe in 1912 re-organised the arrangements under the general charge of a Secretary for Indian students, Mr. (now Sir) C. E. Mallet who resigned at the close of 1916. He was succeeded by Mr. Arnold under the designation of Educational Adviser for Indian Students to the Secretary of State. Mr. N. C. Sen has followed Mr. Arnold as Local Adviser in London, and there are corresponding officers at the modern provincial universities.

Two strange delusions (in some cases they may be called deliberate misrepresentations) have been propagated in reference to these arrangements. One is that the India Office set up the Bureau in order to track down the wave of seditious sentiment which culminated in the assassination of Sir Curzon Wyllie nine years ago. As a matter of fact the Bureau was established three months before the commission of that crime, and was proposed at least a year previously. The object, as *The Times* observed in September 1908, was not "to put these young men into political leading strings, nor officially to restrict their liberty. It lies in doing all that is possible to facilitate their educational progress and their general welfare, and in bringing them under wholesome and helpful influence." Mr. Arnold accepted his appointment on the distinct understanding that there would be no espionage

Removing Barriers.

It is no less of a delusion for the students to hold, as some of their elder fellow-countrymen have encouraged them to do, that the Bureau is responsible for restrictive rules and regulations of colleges and other institutions, or at any rate for their continuance in spite of protests. The fact is that in consequence of the wave of disaffection to which reference has been made, and of various practical difficulties arising from the growth in numbers of Indian applicants for admission, many of the universities and other educational institutions had passed restrictive, and in some cases almost prohibitive, regulations affecting Indians when the Bureau came into being. The authorities in question are independent of outside control, and of no department in Whitehall are they more so than of the India Office. The Bureau cannot do more than approach them with requests and suggestions for the benefit of Indians, or with undertakings to afford the sponsorship which in many cases is made a condition of admission.

Oxford and Cambridge.

So far from blocking the way, as hostile observers have alleged, the Bureau has been singularly successful in opening closed doors and mitigating any real grievances. Its greatest triumph is that at Oxford and Cambridge, where naturally the difficulties of admission have been most pronounced, it has paved the way to the creation of University machinery to replace its own operations. The Oriental Delegacy at Oxford and the inter-collegiate Indian Students' Committee at Cambridge have now undertaken all the work hitherto carried on by the Local Advisers, and thus Indian undergraduates are given a welcome *locus standi*. Every element of Government control, so disliked by many of the students, has been eliminated by this practical recognition of the two ancient universities of a special responsibility towards Indians imbibing their culture and traditions. The Secretary of State for India makes grants to *these* bodies, which are about equivalent to the cost of his former local representatives. The working basis between the new bodies and the Department is one of mutual assistance for the benefit of the students, and familiarity with the conditions is assured by the appointment of the late Local Advisers as the respective secretaries.

Whatever may be done to meet real grievances, these are inherent difficulties in the whole problem; but happily no insuperable obstacles of race arise. Sir T. Morison's Committee on State Technical Scholarships reported in 1913 that the difficulties encountered by young Indians in supplementing academic instruction by technical experience in factories and workshops are general in character, being also applicable to their English contemporaries, and that there is "on the whole very little evidence of a racial prejudice against Indians." Nor need any youth go to England under misapprehension as to the facilities for his education and their limitations. The excellent "Handbook of Information for Indian Students" issued by the National Indian Association and the Advisory Committee, now in its fifteenth edition (1914) supplies all relevant facts and advice; and on personal details, the Indian Advisory Committees can be consulted.

Persuasion not Coercion.

It is not the case, as some Anglo-Indians of the old type imagine, that the Bureau could easily exercise disciplinary control over all young Indians in London and elsewhere. The fact is that except in respect to holders of Government and some Native State Scholarships it has *no* disciplinary authority save when parents place their sons under the guardianship of Mr. N. C. Sen or a provincial Adviser, and even in these cases the control can only be exercised in connection with the administration of the regular allowances. The Bureau has had a most beneficial influence in saving scores of young men from falling into debt, intemperance or marital folly, but this has been exercised not coercively but by friendly personal contact and keeping before them the obligation and necessity from every point of view of adhering to the purposes of culture and equipment for which they have gone to England.

The students have hosts of non-official friends and helpers. Under the presidency of Lord Hawke and the chairmanship of Sir F. Robertson an Indian Gymkhana Club has been established with a fine sports centre at Acton, the Null Hill Park Club's ground having been taken over. The cricket eleven of the Club did well in 1917 in matches at Lords and the Oval.

Students and the War.

The removal of misunderstanding and prejudice should be materially promoted by the changed and gratifying conditions brought about by India's response to the call of Empire in the European War.

In this young Indians in England have had their part. A few enlisted in the new Armies raised in England being readily admitted on satisfying the usual physical tests and some of these have lost their lives in the Imperial cause. Many others offered their services unconditionally to the authorities, with the result that an Indian Field Ambulance Corps was organised under the command of Colonel R. J. Baker, late I. M. S. The total enrolled strength of the Corps was 272, of whom altogether 215 were employed at the various Indian hospitals and depots in England, or on the Indian hospital ships. A contingent was sent to Egypt and later to Mesopotamia. The Corps would have grown still further had not the War Office stopped recruitment in consequence of the ample provision otherwise made. Two members of the Corps received permanent, and 38 of them temporary, commissions in the I. M. S. Meanwhile a committee of students pressed the claims of Indians at the Universities and other educational institutions to be admitted to the Officers Training Corps. The official reply was that this is one of several military questions which can only receive adequate consideration from the military authorities after the conclusion of the war.

Appointments to the Indian Services.

Full details of the regulations governing appointments to the Indian Services are published in the India Office List. The more essential particulars, except as regards the Civil Service and Police,—of which fuller details are given elsewhere in this book—are given below.

Indian Agricultural Service.

The appointments in the Indian Agricultural Service include those of Deputy Director of Agriculture, Agricultural Chemist, Economic Botanist, Mycologist, Entomologist, Professors of Agriculture, Chemistry and Botany at Agricultural Colleges, and the like. Some of these are included in the Imperial Department of Agriculture under the direct control of the Government of India, but the majority are included in the Departments of Agriculture of the several provinces of India. In some cases candidates will be appointed direct to these posts, but in most cases they will be appointed as supernumeraries, will undergo a further course of training in India in Indian agriculture, and will be appointed to posts, for which in the opinion of the Government they are considered suitable, on the regular establishment as vacancies occur. Appointments are made by the Secretary of State for India as occasion may require. Candidates must, as a rule, be not less than 23, nor more than 30 years of age. In selecting candidates for appointment, weight will be given to the possession of (*a*) a University degree in honours in science or the diploma of a recognised school of agriculture or other like distinction; (*b*) qualifications in a special science according to the nature of the vacancy to be filled; (*c*) practical experience. Importance is also attached to bodily activity and ability to ride, and selected candidates have to undergo an examination by the Medical Board of the India Office as to their physical fitness for service in India.

The salary attached to posts in the Indian Agricultural Service will ordinarily be:—

		Rs.	
For the first year	..	400	per mensem.
„ second year	..	430	„
„ third year	..	460	„
„ fourth and subsequent years	..	500	rising by annual increments of Rs. 50 a month to Rs 1,000 a month.

Candidates who are required to undergo a further course of training in India as explained above will be appointed on this scale of salary, commencing on a pay of Rs. 400. Where, for special reasons, a candidate is recruited for direct appointment to one of the regular posts under paragraph 1, his initial pay will be determined with reference to the special qualifications on the length of European experience required for the appointment for which he is specially selected, but his subsequent increments of salary will be regulated by the foregoing scale. In addition to this scale of pay, officers filling appointments directly under the Government of India, as distinguished from appointments under Local Governments (but not including officers holding supernumerary posts, the post of Inspector-General, or the post of Director of the Pusa Institute) will be eligible for local allowances conditional on approved good work, and the Government reserves to itself the fullest discretion as to granting, withholding, or withdrawing them.

Indian Civil Veterinary Department.

The officers of the Indian Civil Veterinary Department perform or supervise all official veterinary work in India, other than that of the Army, and are debarred from private professional practice in India. Their duties may be divided into three classes, under the following heads:—

(*a*) Educational work in veterinary colleges;
(*b*) Horse and mule breeding;
(*c*) Cattle disease and cattle breeding.

Appointments to this Department are made, as vacancies occur, by the Secretary of State for India. Candidates must not (except on special grounds to be approved by the Secretary of State) be over 26 years of age, and must possess a diploma from the Royal College of Veterinary Surgeons. Evidence of a knowledge of bacteriology, and of capacity for carrying out original research, will be specially taken into account in estimating the claims of candidates. Good health, a sound constitution, and active habits are essential, and candidates must be certified by the Medical Board of the India Office to be physically fit for service in India.

Pay will be as follows:—On arrival in India Rs. 500 a month, rising by Rs. 40 each year to Rs. 1,100, which rate will continue from the beginning of the 16th to the end of the 20th year of service; after the beginning of the 21st year Rs. 1,200 a month.

Ecclesiastical Establishments (Church of England).

Appointments of Chaplains on Probation are made from time to time by the Secretary of State for India, as vacancies occur. Candidates for these appointments must be Priests who are between the ages of twenty-seven and thirty-four years, and have been for three years altogether in Holy Orders. Applications for nominations should be submitted to the Secretary of State.

A Chaplain will be on probation for three years (*a*); if confirmed in his appointment at the end of that period, he will be admitted as a Junior Chaplain.

The salaries of Chaplains are:—

Senior Chaplains, Rs. 10,200 per annum for five years, and then Rs. 12,000 per annum.

Junior Chaplains, Rs. 6,360 per annum for five years, and thereafter Rs. 8,160 per annum until promoted to be Senior Chaplains.

Chaplains on Probation, Rs. 5,760 per annum.

A Junior Chaplain becomes a Senior Chaplain after ten years' service, excluding the period of probation

The retiring pay of Chaplains is regulated by the following scale:—

	Per annum. £ s. d.
After 23 years' service, with an actual residence in India of 20 years, including the period of probation	365 0 0
On Medical Certificate.	
After 18 years' actual residence in India, including the period of probation	292 0 0
After 13 years ditto	173 7 6
After 10 years ditto	127 15 0

Ecclesiastical Establishments (Church of Scotland).

The appointments of Chaplains of the Church of Scotland on probation are made from time to time by the Secretary of State for India, according as vacancies occur. Candidates for these appointments must have been licensed for three years and be under thirty-four years of age. Applications for nominations should be submitted to the General Assembly's Committee on Indian Churches along with testimonials based on a personal knowledge of the candidate's qualifications. Chaplains will be on probation for three years (*a*); if confirmed in their appointment at the end of that period, they will be admitted as Junior Chaplains.

The salaries of Chaplains are:—

Senior Chaplains, Rs. 10,200 per annum, and then Rs. 12,000 per annum.

Junior Chaplains, Rs. 6,360 per annum for five years, and thereafter Rs. 8,160 until promoted to be Senior Chaplains.

Chaplains on probation, Rs. 5,760 per annum.

A Junior Chaplain becomes a Senior Chaplain after 10 years' service, excluding the period of probation.

The retiring pay of Chaplains is regulated by the following scale:—

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After 23 years' service, with an actual residence in India of 20 years, including the period of probation	365 0 0
On Medical Certificate.	
After 18 years' actual residence in India, including the period of probation	292 0 0
After 13 years' ditto	173 7 6
After 10 years' ditto	127 15 0

Educational Appointments.

The Indian Educational Service comprises those posts in the Educational Department to which appointments are made in England by the Secretary of State, and is thus distinguished from the Provincial Educational Services, which are recruited exclusively in India. It consists of two branches, the teaching, including Principalships and Professorships in the various Government Colleges and Head Masterships in certain High Schools; and the inspecting, including Inspectorships of Schools; but officers may be transferred at the discretion of Government from one branch to the other, and the conditions of pay and service are the same for both. It also includes certain special appointments, such as those of Superintendents of Schools of Art, for which special qualifications are required and special terms of engagement are prescribed. Officers of the teaching branch may be required to undertake duties in connection with the supervision of students in hostels or boarding houses, and with the direction of their studies and recreations. Appointments are made by the Secretary of State as occasion may require. Only laymen are eligible, candidates must as a rule be not less than 23, nor more than 30 years of age, but exceptions are sometimes made as regards the maximum limit only. Candidates must be British subjects, and must furnish evidence of having received a liberal education.

In selecting candidates for appointment, weight will be given to the possession of (*a*) a University degree in Honours, or equivalent distinction; (*b*) experience as a teacher; (*c*) qualifications in special subjects, depending on the nature of the vacancy to be filled. In selecting candidates for inspecting appointments, weight is given to linguistic talent, capacity for organisation and knowledge, practical or theoretical, of educational methods.

The salaries paid are as follows:—A newly appointed Inspector or Professor receives Rs. 500 a month, rising by annual increments of Rs. 50 a month to Rs. 1,000 a month. When this point has been reached, the increase of his emoluments depends upon his promotion, and takes the form of allowances ranging from Rs. 200 to Rs. 500, in addition to the salary of Rs. 1,000. There are at present 30 such allowances. There is in every Province a Director of Public Instruction. The posts of Director of Public Instruction are reserved for the Indian Educational Service so long as members of that Service can be found well qualified to fill them. Their pay differs in different Provinces:—

Three receive a salary of Rs. 2,000—100—2,500 a month.

Two receive a salary of Rs. 2,000 a month.

One receives a salary of Rs. 1,750—50—2,000 a month.

Two receive a salary of Rs. 1,500—100—2,000 a month.

One receives a salary of Rs. 1,250 rising to Rs. 1,500 a month.

Head Masters are appointed on an initial pay of Rs. 500, rising by annual increments of Rs. 50 a month to Rs. 1,000 a month, except in cases in which Local Governments may prefer to recruit on the scale of Rs. 500 a month, rising by annual increments of Rs. 50 a month to Rs. 750 a month. Head Masters are eligible for subsequent transfer to Inspectorships or, if qualified, professorships. In all cases, increments of salary are given for approved service only.

For the appointments dealt with above men only are eligible. There are, however, some posts in the Indian Educational Service which are open to women and these comprise appointments as Inspectresses of Girls' Schools, Princi

pals of Training Colleges, and occasionally Headmistresses of Schools. The salary attached to these appointments is ordinarily Rs. 400 a month, rising by annual increments of Rs.20 a month to Rs. 500 a month.

The Secretary of State is sometimes requested by the Government of India to supply persons to fill temporary vacancies in the Indian Educational Service, generally professorships in Colleges. Such appointments are made for not less than a university year (about nine months), with a prospect, in the case of thoroughly approved service, of future selection to fill either a temporary or a permanent appointment. The salary is Rs. 500 a month, rising by annual increments of Rs. 50 a month.

Indian Forest Service.

The Secretary of State for India in Council makes appointments of Probationers for the Indian Forest Service, according to the numbers annually required.

Candidates must be not less than 19 but under the age of 22 years.

Candidates must have obtained a degree with Honours in some branch of Natural Science in a University of England, Wales or Ireland, or have passed the Final Bachelor of Science Examination in Pure Science in one of the Universities of Scotland. A degree in Applied Science will not be considered as fulfilling these conditions. Candidates will be required to produce evidence that they have a fair knowledge of either German or French.

The ordinary period of probation will be two years. During that time probationers will be required to pass through the Forestry course at one of the following Universities—Oxford, Cambridge or Edinburgh (subject to the arrangement of a suitable course)—becoming members of that University, if not so already; to obtain the Degree or Diploma in Forestry which it grants; and to satisfy such other tests of proficiency as may be deemed necessary.

During the vacations, the Probationers will, under the direction and supervision of the Director of Indian Forest Studies appointed by the Secretary of State for India in Council, receive practical instruction in such British and Continental forests as may be selected for the purpose.

The Secretary of State for India in Council will make payments to each Probationer at the rate of £120 annually, not exceeding a total of £240.

Probationers who obtain a Degree or Diploma in Forestry, and also satisfy such other tests of proficiency as may be prescribed, will be appointed Assistant Conservators in the Indian Forest Department, provided they are of sound constitution and free from physical defects which would render them unsuitable for employment in the Indian Forest Service.

The sanctioned scale of the service at present is:—

	Rs.	
1 Inspector-General of Forests	2,650 a month.	
1 Assistant Inspector-General of Forests		
2 Chief Conservators (Burma and Central Provinces) ..	2,150	
22 Conservators, in three grades (including President, Forest Research Institute and College) ..	1,900 1,700 1,500	Respectively
187 Deputy and Assistant Conservators		

An Assistant Conservator of Forests will draw pay at the rate of Rs. 380 a month from the date of his reporting his arrival in India rising by annual increments of Rs. 40 a month to Rs. 700 a month, thereafter by annual increments of Rs. 50 a month to Rs. 1,250 a month in the 20th year of service.

After a service of not less than 20 years, a retiring pension is granted not exceeding the following amounts:—

Scale of Pension.		Maximum Limit of Pension.
Years of Completed Service.	Sixtieths of Average Emoluments.	
20 to 24	30	Rs. 4,000 a year.
25 and above		Rs. 5,000 a year.

Indian Geological Survey.

The Geological Survey Department is at present constituted as follows:—

	Monthly Salary Rs.		
1 Director	2,000		
3 Superintendents	1,000 rising by	Rs. 80 to	Rs. 1,400
15 Assistant Superintendents:—			
For the first five years	350 „	30 „	500
Thereafter	500 „	50 „	1,000
1 Chemist	500 „	50 „	1,000

Appointments to the Department are made by the Secretary of State for India. They will usually be made about July of each year, and the probable number of appointments will, if possible, be announced about two years in advance. The age of candidates should not exceed 25. Besides a good general education, a sound education in geology is essential: a University degree and a knowledge of French or German will be regarded as important qualifications; and certificates of a high moral character will be required. Candidates must also have had one or two years' practical training in mines, or in technical laboratories, as may be required by the Government of India. First appointments are probationary for two years.

India Office.

Vacancies in the clerical establishment of the Secretary of State for India are filled from among the successful candidates at the General Examinations (Class I. and Second Division), which are held from time to time by the Civil Service Commissioners for appointments in the Home Civil Service. The Examination for Class I. Clerkships is the same as the open Competitive Examination for the Civil Service of India. Further particulars may be obtained upon application to the Secretary, Civil Service Commission, Burlington Gardens, London, W.

Indian Public Works Department.

The Secretary of State for India in Council makes appointments of Assistant Engineers in the Public Works Department of the Government of India.

Candidates must have attained the age of 21, and not attained the age of 24 years.

Candidates must produce evidence that they have (1) obtained one of the University degrees mentioned in Appendix I., or (2) passed the A.M.I.C.E. examination, or (3) obtained such diploma or other distinction in Engineering as may, in the opinion of the Selection Committee, be accepted as approximately equivalent to the degrees mentioned.

The Engineer Establishment of the Indian Public Works Department consists of a staff of engineers, military and civil, engaged on the construction and maintenance of the various public works undertaken by the State in India.

2. The permanent establishment of the Department is recruited from the following sources:—

(1) Officers of Royal Engineers.

(2) Persons appointed to the Imperial Service by the Secretary of State by selection from the United Kingdom.

(3) Persons educated at the Government Civil Engineering Colleges in India and appointed to the Provincial Services by the Government of India.

(4) Occasional admission of other qualified persons.

3. The various ranks of the department are as follows:—

	Salary per annum (Imperial Service) Rs.
Chief Engineer, First Class	33,000
,, ,, Second Class	30,000
Superintending Engineer, First Class .	24,000
,, ,, Second Class ..	21,000
,, ,, Third Class ..	18,000
Executive Engineer, 20th year of service and following years	15,000
Executive Engineer, 19th year of service...	14,400
,, ,, 18th ,, ,, ..	13,800
,, ,, 17th ,, ,, ..	13,200
,, ,, 16th ,, ,, ..	12,600
,, ,, 15th ,, ,, ..	12,000
,, ,, 14th ,, ,, ..	11,400
,, ,, 13th ,, ,, ..	10,800
,, ,, 12th ,, ,, ..	10,200
,, ,, 11th ,, ,, ..	9,600
Assistant Engineer, 10th ,, ,, ..	9,000
,, ,, 9th ,, ,, ..	8,400
,, ,, 8th ,, ,, ..	7,920
,, ,, 7th ,, ,, ..	7,440
,, ,, 6th ,, ,, ..	6,960
,, ,, 5th ,, ,, ..	6,480
,, ,, 4th ,, ,, ..	6,000
,, ,, 3rd ,, ,, ..	5,520
,, ,, 2nd ,, ,, ..	5,040
,, ,, 1st ,, ,, ..	4,560

The increments will be given for approved service only and in accordance with the rules of the Department.

Exchange compensation allowance will not be granted to future entrants.

Promotions above the grade of Executive Engineer are dependent on the occurrence of vacancies in the sanctioned establishment, and are made wholly by selection; mere seniority is considered to confer no claim to promotion.

State Railways.

The Secretary of State for India in Council will, from time to time as may be required, make appointments of Assistant Traffic Superintendent on Indian State Railways.

Candidates must possess one or other of the following qualifications, *viz.*:—

(*a*) Not less than two years' practical experience of work in the Traffic Department of a British or Colonial Railway together with evidence of a sound general education.

(*b*) A degree or diploma of any teaching University in the United Kingdom granted after not less than three years' study in that University, or a technical diploma or certificate recognized by the Secretary of State.

The establishment of the Superior Department of Indian State Railways consists of a staff of officers, military and civil, engaged on the various railways administered by the State in India. This establishment is recruited from the following sources:—

(i) Officers of Royal Engineers;

(ii) Persons appointed by the Secretary of State by selection from the United Kingdom;

(iii) Persons appointed in India.

(iv) Occasional admission of other qualified persons.

The various ranks of the Department are as follows:—

	Salary per annum. Rs.
Traffic Managers	24,000
Deputy Traffic Managers	18,000
District Superintendents:—	
Class II., Grade 1	13,200
„ Grade 2	12,000
„ Grade 3	10,800
„ Grade 4	9,600
„ Grade 5	8,400
Assistant Superintendents:—	
Class III., Grade 1	6,600
„ Grade 2	5,400
„ Grade 3	4,800
„ Grade 4	3,600
„ Grade 5	2,400-3,000

The establishments of the Superior Locomotive and Carriage and Wagons Departments of Indian State Railways consist of officers engaged on the various railways administered by the State in India. These establishments are recruited from the following sources:—

(i) Persons appointed by the Secretary of State by selection from the United Kingdom;

(ii) Persons appointed in India;

(iii) Occasional admission of other qualified persons.

The various ranks of the Departments are as follows:—

	Salary per annum Rs.
Locomotive Superintendents	24,000
Deputy Locomotive Superintendent ..	18,000
Carriage and Wagon Superintendents	18,000 or 21,000
Deputy Carriage and Wagon Superintendents	15,000
Both Departments. District Superintendents:—	
Class II., Grade 1	13,200
„ Grade 2	12,000
„ Grade 3	10,800
„ Grade 4	9,600
„ Grade 5	8,400
Assistant Superintendents:—	
Class III., Grade 1	6,600
„ Grade 2	5,400
„ Grade 3	4,800
„ Grade 4	3,600
„ Grade 5 ..	2,400-3,000

Telegraph Department.

There are not at present any vacancies in the Superior Establishment of the Indian Telegraph Department, and it is considered unnecessary for the present to recruit any Assistant Superintendents from the United Kingdom. The arrangements for the future recruiting of the Department have not been finally settled. The various ranks of the superior establishment are as follows:—

	Maximum Salary per mensem Rs.
Director-General	3,000
Deputy Director-General	2,000
Directors	1,800
Deputy Directors	1,600
Chief Superintendents, 1st Class ..	1,400
Chief Superintendents, 2nd class ..	1,250
Superintendents, 1st Grade	1,000
„ 2nd Grade	850
Assistant Superintendents, 1st Grade..	700
„ „ 2nd Grade.	550
„ „ 3rd Grade.	450
„ „ 4th Grade.	350

His Majesty's Indian Army.

A certain number of appointments to the Indian Army are offered to Cadets of the Royal Military College, and a certain number to candidates from the Universities. All King's Cadets (British and Indian) and Honorary King's Cadets nominated by the Secretary of State for India in Council have the option, during their last term at the Royal Military College, of electing for appointment to the Unattached List for the Indian Army, or for appointment to commissions in British Cavalry or Infantry. The appointments to the Unattached List for the Indian Army remaining after the claims of the King's Cadets and Honorary King's Cadets (Indian) have been satisfied are allotted in order of merit to Cadets who satisfy the requirements of the Regulations respecting admission to the Royal Military College, and who elect to compete for such appointments, at each final Examination at Sandhurst.

King's India Cadetships.

Twenty King's India Cadets are nominated each half-year from among the sons of persons who have served in India in the Military or Civil Service of His Majesty or of the East India Company. A Candidate is not eligible for nomination as a King's India Cadet if he be under 17 or over 19½.

A candidate is not eligible for nomination, and his claims will in no circumstances be considered until he (*a*) has qualified at the Army Entrance Examination; or (*b*) is prepared to attend the next examination. The fees of King's India Cadets at the Royal Military College are not payable by the State, except in cases where, after due inquiry, their pecuniary circumstances are ascertained to be such as to justify the payment.

Honorary King's India Cadetships.

Three Honorary King's India Cadets are nominated annually by the Secretary of State for India. Such Cadets are appointed from—

(*a*) The sons of officers of the Indian Army, who were killed in action, or who have died of wounds received in action within six

months of such wounds having been received, or from illness brought on by fatigue, privation, or exposure, incident to active operations in the field before an enemy, within six months after their having been first certified to be ill.

(*b*) The sons of officers of the Indian Army, who have obtained the brevet substantive rank of Major or Lieutenant-Colonel, and have performed long or distinguished service.

An Honorary King's Cadetship carries with it no pecuniary advantage.

Queen Alexandra's Military Nursing Service for India.

The Nursing establishment is for duty with British officers and soldiers, and at present consists of:—

4 Lady Superintendents.

16 Senior Nursing Sisters.

71 Nursing Sisters.

The numbers in these grades are subject to alteration.

Nursing Sisters at the time of appointment must be over 27 and under 32 years of age. Candidates for the Service must have had at least three years' preliminary training and service combined in the wards of a British general hospital or hospitals of not less than 100 beds in which adult male patients receive medical and surgical treatment, and in which a staff of Nursing Sisters is maintained.

The duration of a term of service, for all grades of lady nurses, is five years. A lady nurse who has been pronounced by a medical Board to be physically fit for further service in India, may be permitted to re-engage for a second and third term at the option of the Government, and again for a fourth term, or until the age of compulsory retirement, if in all respects efficient and if specially recommended by the Commander-in-Chief in India. But a lady nurse will not under any circumstances be permitted to remain in the service in the grade of Lady Superintendent beyond the age of 55 years, or in either of the other grades beyond the age of 50 years.

Rates of Pay.

(In addition to free quarters, fuel, light, and punkah-pullers.)

	Rs. per mensem.
Lady Superintendent ..	300 ,,
Senior Nursing Sister over five years in grade ..	225 ,,
Senior Nursing Sister under five years in grade ..	200 ,,
Nursing Sister over five years in grade	200 ,,
Nursing Sister under five years in grade	175 ,,

Royal Indian Marine.

All first appointments of executive officers in the Royal Indian Marine are made by the Secretary of State for India.

The limits of age for appointment to the junior executive rank, that of Sub-Lieutenant, are 17 and 22 years, and no candidate will be appointed who does not possess the full ordinary Board of Trade certificate of a Second Mate; certificates for foreign-going *steamships* will not be accepted.

PAY AND ALLOWANCES.

The present establishment of officers of the Royal Indian Marine and their allowances are as follows:—

		per mensem.
32	Commanders on pay ranging from Rs 350 to Rs. 500, in addition to staff or command pay.	
72	Lieutenants on completing eight years' seniority .	On Rs. 300.
	Lieutenants on completing six years' seniority .	On Rs. 250.
	Lieutenants on completing three years' seniority ..	On Rs 200.
	Lieutenants under three years' seniority ..	On Rs. 150
	Sub-Lieutenants ..	On Rs. 125
	Sub-Lieutenants ..	On Rs. 100

Total .. 104.

In addition, 3 Commanders and 8 Lieutenants are at present employed in the Marine Survey of India.

A certain number of Shore, Port, and Marine Survey appointments are usually reserved for officers of the Royal Indian Marine. The numbers so reserved and the allowances attached (in addition to pay of grade), are as follows:—

	Allowances per mensem. Rs.
4 Shore appointments ..	400—1000
16 Port appointments	320— 870
	per diem.
11 Marine Survey appointments	4—20

The sanctioned establishment of the Engineers branch of the Marine numbers 82, of whom at present, 10 are Chief Engineers, and the remainder Engineers and Assistant Engineers.

STERLING EQUIVALENTS.

N.B.—In calculating the sterling equivalents of rupee salaries drawn by Europeans appointed in England to permanent service in India, it is necessary to bear in mind that in some cases Exchange Compensation Allowance is drawn in addition to salary. This allowance is at present at the rate of 6¼ per cent. on the salary, subject to a maximum of Rs. 138-14-3 a month; but the rate is subject to alteration in the event of any material variation in the average rate of exchange between England and India.

The following table shows the approximate equivalent in sterling of the rupee Salaries stated, (*a*) when Exchange Compensation Allowance is not granted, (*b*) when it is granted at the rate just mentioned:—

Rupees per Mensem.	Rupees per Annum.	(*a*) Equivalent without E. C. A.	(*b*) Equivalent with E. C. A.	Rupees per Mensem.	Rupees per Annum.	(*a*) Equivalent without E. C. A.	(*b*) Equivalent with E. C. A.	Rupees per Mensem.	Rupees per Annum.	(*a*) Equivalent without E. C. A.	(*b*) Equivalent with E. C. A.	Rupees per Mensem.	Rupees per Annum.	(*a*) Equivalent without E. C. A.	(*b*) Equivalent with E. C. A.
		£	£			£	£			£	£			£	£
100	1,200	80	85	650	7,800	520	552	1,600	19,200	1,280	1,360	2,900	34,800	2,320	2,431
125	1,500	100	106	700	8,400	560	595	1,700	20,400	1,360	1,445	3,000	36,000	2,400	2,511
150	1,800	120	127	750	9,000	600	637	1,800	21,600	1,440	1,530	3,100	37,200	2,480	2,591
175	2,100	140	149	800	9,600	640	680	1,900	22,800	1,520	1,615	3,200	38,400	2,560	2,671
200	2,400	160	170	850	10,200	680	722	2,000	24,000	1,600	1,700	3,300	39,600	2,640	2,751
250	3,000	200	212	900	10,800	720	765	2,100	25,200	1,680	1,785	3,400	40,800	2,720	2,831
300	3,600	240	255	950	11,400	760	807	2,200	26,400	1,760	1,870	3,500	42,000	2,800	2,911
350	4,200	280	297	1,000	12,000	800	850	2,300	27,600	1,840	1,951	3,600	43,200	2,880	2,991
400	4,800	320	340	1,100	13,200	880	935	2,400	28,800	1,920	2,031	3,700	44,400	2,960	3,071
450	5,400	360	382	1,200	14,400	960	1,020	2,500	30,000	2,000	2,111	3,800	45,600	3,040	3,151
500	6,000	400	425	1,300	15,600	1,040	1,105	2,600	31,200	2,080	2,191	3,900	46,800	3,120	3,231
550	6,600	440	467	1,400	16,800	1,120	1,190	2,700	32,400	2,160	2,271	4,000	48,000	3,200	3,311
600	7,200	480	510	1,500	18,000	1,200	1,275	2,800	33,600	2,240	2,351	5,000	60,000	4,000	4,111

The Indian Civil Service.

In the early years of the eighteenth century the East India Company was still little more than a body of traders. The genesis of the Indian Civil Service is to be sought in the modifications which the Company underwent as it found itself year by year more involved in the government of the country with which it was trading. It was gradually realised that neither the pay nor the training of the Writers, Factors and Merchants of the Company was adequate to the administrative work which they were called on to perform. As a result this work was often indifferently done, and corruption was rife. To Lord Cornwallis is due the credit of having reorganized the administrative branch of the Company's service, in accordance with **three main principles** from which there has been hitherto no deviation. These were that every civil servant should covenant neither to engage in trade nor to receive presents, that the Company on their side should provide salaries sufficiently handsome to remove the temptation to supplement them by illegitimate means, and that, in order that the best men might be attracted the principal administrative posts under the Council should be reserved for members of the Covenanted Civil Service as it was called. The first of these principles is embodied not only in the covenant which every member of the service still has to sign on appointment, but also in the "Government Servants' Conduct Rules," which are applicable to every civil department, however recruited. As regards the second, the scale of salaries originally prescribed was so handsome that it has not yet been considered expedient to undertake any general revision of it. The list of reserved posts remains, too much the same as in 1793, though certain modifications have been introduced to meet Indian aspirations.

At first nominations to the service were made by the Directors, but this right was withdrawn by Act of Parliament in 1853, and since 1855 **appointments** have been open to public competition, all natural-born subjects of the Crown being eligible. The age-limits and other conditions of examination have varied considerably from time to time, but at present candidates are examined between the ages of 22 and 24. At first young officers were sent straight to their appointments on recruitment, but in 1800 Lord Wellesley established a college at Fort William for their preliminary training. This was not a success and in 1805 a college at Haileybury was substituted, and for 53 years nominees underwent a two years' training there before proceeding to India. At present a year's course at a British University is prescribed, and at the close of this year there is a further examination. Failure to pass this means final loss of appointment, and seniority in the service is determined by combining the result of the open competition and this final compulsory examination.

The Statute of 1793 (33 Geo. cap. 52) modified in 1861, sets forth the list of **offices reserved** for members of the Indian Civil Service. It includes among others the offices of secretaries and under-secretaries to governments, commissioners of revenue, Civil and Sessions Judges, Magistrates and Collectors* of Districts (in the regulation provinces) and joint and assistant Magistrates and Collectors. In the non-regulation provinces, many of the above posts are held by military officers. In addition to these reserved posts there are many other appointments which the Indian Civilian can hold. He is now, however, debarred from permanent appointment as Governor-General or Governor, the highest office he can attain being those of Lieutenant-Governor and Member of the Viceroy's Council.

Despite the complete eligibility of **natives of India**, and despite the numbers of Indian who now seek their education in England, comparatively few have succeeded in obtaining appointments by open competition. On the 1st of April 1913 only 46 of the 1,319 civilians on the cadre were natives of India. In 1870 an important Act (33 Vict. cap. 33) was added to the statute book which allowed the appointment of "natives of India of prove merit and ability" to any of the offices reserved by law to members of the Covenanted Civil Service, such officers were known as Statutory or Uncovenanted Civilians. This method of appointment was dropped in 1889, and facilities were afforded to Indians for promotion through the ranks of the Provincial Service.

The young civilian, on joining his appointment in India, is attached to a district as **assistant to the Collector.** He is given limited magisterial powers, and after passing examinations in the vernacular and in departmental matters he attains to full magisterial powers and holds charge of a revenue subdivision. During this period he is liable to be selected for the judicial branch and become an Assistant Judge. In course of time promotion occurs and he becomes either Collector and District Magistrate, or District and Sessions Judge: this promotion does not generally occur before he has served for at least ten years. The District Judge is the principal civil tribunal of the district and wields extensive appellate powers. In his capacity as Sessions Judge he tries the more important criminal cases of the district.

The **Collector** is not merely chief magistrate and revenue officer of his district. He also forms a court of appeal from subordinate magistrates, supervises municipalities and local boards, is chief excise officer and district registrar, and in general represents Government in the eyes of the people. The Collector and his assistants are expected to travel over their

* The Chief Revenue Officer of a District is known as the Collector in the "regulation provinces" of Bengal, Madras, Bombay, Agra and Behar and Orissa. Elsewhere he is the Deputy Commissioner, and his assistants are Assistant Commissioners.

charges; touring rules vary in different provinces, but in Bombay the Collector spends four and his assistants seven months in the year on tour.

By the time the highest grades in the offices of Collector or Judge are reached the Civilian has, as a rule, nearly completed the 25 years which are necessary before he can retire. Should he elect to continue in service, there are still posts to which he can look forward for promotion. On the one hand, he may become a Commissioner or even a Member of Council, and on the other, there are Judicial Commissionerships and seats on High Court Benches. Such is the normal career of a Civilian, but this, by no means, completes the account of his prospects, for nearly one-fourth of the service is, as a rule, employed in posts—some reserved and some not—out of the regular line. A number of Civilians are employed in the Imperial and Provincial Secretariats, some are in political employ in the Native States, others hold responsible positions in the Customs, Police, Salt, Post Office and other departments, or supervise big municipalities and public trusts.

The Civilian may retire after 25 years' service and in the ordinary way must retire on reaching the age of 55. He contributes throughout his service to a pension which is fixed, regardless of whether he has risen to be a Lieutenant-Governor, or has remained at the foot of the ladder. Every Civilian, moreover, married or single, subscribes to an annuity fund which provides for the widows and orphans of deceased members of the service.

Public Services Commission.

In July, 1912, it was announced that the King had been pleased to approve the appointment of a Royal Commission to examine and report upon the Public Services in India. The Royal Commission was constituted as follows:—

Chairman.—The Right Hon. Lord Islington, K.C.M.G.

The Earl of Ronaldshay, M.P.

Sir Murray Hammick, K.C.S.I., C.I.E., Indian Civil Service.

Sir Theodore Morison, K.C.I.E., Member of the Council of India.

Sir Valentine Chirol.

Frank George Sly, Esq., C.S.I., Indian Civil Service.

Mahadev Bhaskar Chaubal, Esq., C.S.I., Member of the Governor of Bombay's Executive Council.

Gopal Krishna Gokhale, Esq., C.I.E., Member of the Viceroy's Legislative Council.

Walter Culley Madge, Esq., C.I.E., Member of the Viceroy's Legislative Council.

Abdur Rahim, Esq., Judge of the Madras High Court.

James Ramsay MacDonald, Esq., M.P.

Herbert Albert Laurens Fisher, Esq., Fellow and Tutor of New College, Oxford.

The Terms of Reference were as follows:—

To examine and report upon the following matters in connexion with the Indian Civil Service, and other civil services, Imperial and Provincial:—

(1) The methods of recruitment and the systems of training and probation;

(2) The conditions of service, salary, leave, and pension.

(3) Such limitations as still exist in the employment of non-Europeans and the working of the existing system of division of services into Imperial and Provincial;

and generally to consider the requirements of the Public Service, and to recommend such changes as may seem expedient.

Work of the Commission.—The Royal Commission visited India in the cold weather of 1912-13, and toured extensively in India, including Burma, confining their attention mostly to hearing the evidence of and relating to the Indian Civil Service. They subsequently sat in London and in October, 1913, again left for India to enquire into 28 Services other than the Indian Civil and the Provincial Services. They assembled first at Delhi on November 3rd, and examined Imperial officers and witnesses from the United Provinces, the Punjab and the North-West Frontier Province. They then assembled at Calcutta in the middle of December, to hear witnesses from Bengal, Bihar and Orissa, and Burma.

Early in February the Royal Commission went to Madras, and completed the tour at Bombay, where witnesses from Western India and the Central Provinces were heard.

The Commission returned to England in the spring of 1914, and drew up a report of which publication was delayed on account of the war, until January, 1917. This report is a large blue book of 529 pages. The actual report of the Commissioners, with their recommendations, runs to 65 pages but the annexures covering the various departments occupy 300 pages. Special minutes relating to the report by members who sign it take up 22 pages, while a long minute, which really constitutes a separate report, by Mr. Abdur Rahim, of the Madras High Court, who regrets he has been unable to agree in the tenor of report or accept the more important of the conclusions of the commissioners, runs to no fewer than 94 pages.

Conclusions —The Commission at the end of their report thus sum up their conclusions:—

At the end of the various annexures to our report we have summarised in detail the recommendations which we have made with regard to each service. The proposals we have put forward for increased expenditure have been framed without regard to the prior claims of the present war on the resources of the country, and may need to be given effect to gradually. Otherwise we have taken into account the existing situation. The main conclusions to which we have come are as follows:—

(1) Where it is necessary to organise the public services into higher and lower branches,

this should be arranged on the basis of the work which they are required to do, and not, as is now in some instances the case, of the race of, or the salaries drawn by, their members, or any such artificial distinction (paragraphs 24 to 26).

(*ii*) Officers promoted from a lower into a higher service should ordinarily be given the same opportunities as officers who have been directly recruited and should be eligible on their merits for appointment to any post in their service. Both classes of officers should be shown on the same list and should take seniority amongst themselves from their date of entry on the list. Except in the case of the Indian civil service all promoted officers should also be made full members of the service into which they are promoted (paragraph 27).

(*iii*) The practice of employing military officers on civil duties should be continued in the medical, public works, railway, and survey of India departments, and subject to the conditions stated Military officers should also be eligible for appointment to the mint department. Elsewhere the practice of recruiting them should be allowed to die out, but this should take place gradually in the case of the civil service in Burma (paragraph 28).

(*iv*) The practice of employing members of the Indian civil service in other departments should be continued in the post office, and in the Northern India salt revenue, Indian finance and customs departments. Such officers should also continue to supervise the work of the land records (Burma), registration, salt and excise, and survey (Madras) departments. They should no longer be appointed directors of agriculture, but rural commissionerships should be created and be manned from their ranks. The Inspector-generalships of police should no more be recruited for in the Indian civil service, but Indian civil servants, should continue to be eligible for these appointments subject to the claims of qualified police officers (paragraph 29).

(*v*) The services which lie between the higher and the subordinate services should no longer be designated "provincial" services. If they are organised provincially they should ordinarily bear the name of their province; for example, the Madras civil service, the Bombay police service, and so on. If they are under the Government of India the terms class I and class II should be used for the two services. These terms should also be used in the education department (paragraph 30).

(*vi*) The services for which recruitment is now made normally in India should continue to be recruited for in that country. The Indian finance department should be added to this category. The military finance department should be similarly treated, if there are no military considerations to the contrary. Eventually, similar action should be taken with the customs department, but for the present some recruitment in Europe for this department should be permitted. The remaining services for which recruitment is now made wholly in Europe, or partly in Europe and partly in India, should be divided into three main groups. In the first should be placed the Indian civil service and the police department, in which it should be recognised that a preponderating proportion of the officers should be recruited in Europe. In the second should come services like the education, medical, public works and so on, in which there are grounds of policy for continuing to have in the personnel an admixture of both western and eastern elements. For these services arrangements should be made for recruitment in both countries. In the third should be placed certain scientific and technical services, such as the agricultural and civil veterinary departments, etc., for the normal requirements of which it should be the aim to recruit eventually in India. To this end educational institutions should be developed in India on a level with those now existing in Europe so as to produce the necessary supply of candidates (paragraphs 31 and 32).

(*vii*) No system of state scholarships will provide a suitable method for increasing the number of non-Europeans in the public services (paragraph 35).

(*viii*) In certain services arrangements should be made for the appointment of a minimum number of Indians, but this should not be made a general practice for fear that the minimum may come to be regarded as a maximum (paragraph 35).

(*ix*) To secure an increase in the number of non-Europeans employed, so far as this is not obtained automatically by the proposals made with regard to organization and the place of appointment, different methods should be followed in different services, as detailed in the annexures. Speaking generally, technical institutions in India should be created or expanded; provision should be made for advertising vacancies; Indian members should be appointed to serve on the committies which will advise on the selection of recruits; and, finally, the statistics relating to the employment of members of the various communities should be published every ten years (paragraph 36).

(*x*) The question of the extent to which the services should be manned by the direct recruitment of untried officers and by the promotion of experienced officers from an inferior service should be settled separately for each service, as explained in the various annexures. But in every case opportunities should be created for young men, and direct recruitment should be encouraged wherever possible (paragraph 37).

(*xi*) In the present conditions of India no general system of competitive examinations as a means of entry to the public services is suitable, but where such a method exists it should ordinarily be maintained (paragraph 42).

(*xii*) When nominating direct recruits for admission to the services the authorities in India should act with the advice of committees which should not be purely departmental in character, but should contain persons in touch with educational institutions, and should also have a non-official and an Indian element. Publicity should be given to all vacancies, and applicants should be forbidden to bring outside pressure to bear on individual members of the committees. A similar procedure should be followed in England. Candidates for services recruited in India should ordinarily possess minimum educational qualification. This need not be identical for all candidates, but the standard for all should be the same (paragraph 44).

(*xiii*) In recruiting specialists care should be taken to draw upon the widest possible field (paragraph 45).

(*xiv*) Arrangements can best be made for communal representation in India by the exercise of the powers of Government under the system of nomination proposed. No hard and fast rule or proportion is suitable (paragraph 46).

(*xv*) Except where otherwise provided, direct recruits should be on probation for two years. A probationary course in England should be given only to recruits for the Indian civil and forest services, and in the latter only for so long as recruits are taken from Europe. As the schools of forestry of the United Kingdom are developed, recruits from Europe should be taken from them (paragraph 47).

(*xvi*) The question of training requires to be considered for each service separately, as explained in the various annexures. Inter-provincial conferences of officers responsible for the training of recruits should be encouraged (paragraph 48).

(*xvii*) In fixing the salaries of their employes, Government should pay so much and so much only as is necessary to obtain recruits of the right stamp, and to maintain them in such a degree of comfort and dignity as will shield them from temptation and keep them efficient for the term of their service (paragraph 49).

(*xviii*) Except where otherwise expressly provided, officers should be remunerated by an incremental scale of salaries on the compartment system. Where this is done the rules with regard to acting allowances should be revised (paragraphs 50 and 51).

(*xix*) Exchange compensation allowance should no longer be paid, but generally speaking the amounts now drawn on this account should be added to the salaries of officers (paragraph 52).

(*xx*) The salaries to be paid to Europeans and statutory natives of India respectively should be settled for each service separately and ordinarily in accordance with the principle set out in item xvii above, and not on any general consideration of race or place of recruitment. In services in which different rates are found to be suitable they should be fixed on the merits of each case, and no proportion should be laid down generally as between the amounts payable to the two classes of officers. In services the normal requirements of which will eventually be met in India, the standard scale of salaries should be that considered suitable for statutory natives of India, and special rates should be fixed for Europeans for so long as they are recruited. In certain services in which equality of pay has ong been an established practice this should be maintained. In other services officers should be brought to an equality in the administrative ranks, and earlier in the education department. As a special case statutory natives of India recruited in Europe should be paid as Europeans (paragraphs 53 to 57).

(*xxi*) The salaries to be paid to officers should be as stated in the various annexures. For recruits in India from the ordinary graduate class, or their equivalent amongst members of the domiciled community, a general scale rising from Rs. 250 to Rs. 500 a month should be introduced. Beyond this there should be selection scales of posts suitable to the circumstance of each service. For services requiring higher initial qualifications higher rates should be adopted (paragraph 58).

(*xxii*) The necessary steps should be taken to keep the cadres of the services up to a strength sufficient to cope with the work to be done (paragraph 61).

(*xxiii*) The calculations in accordance with which recruitment is made should be worked out with greater precision, and should be revised periodically with due regard to the requirements of leave and training. More precision is needed in fixing the annual rate of recruitment, and service tables should be prepared and kept up to date for each service or group of services. Distribution lists should be maintained for all services, which are recruited on a system, to show by groups of years the theoretical and actual number of officers present. Excesses or defects should be dealt with at the point where they occur. If in spite of these measures blocks in promotion are experienced, special allowances should be given on the merits of each case (paragraphs 61 to 65).

(*xxiv*) An expert committee should be appointed to simplify the present travelling allowance rules, to consider their sufficiency for everyday purposes, and to revise the classification of officers. Immediate measures should be taken to reimburse officers for all reasonable charges incurred by them on transfer from one station to another, whether personal to themselves or on behalf of their families and household establishments (paragraphs 66 to 68).

(*xxv*) The rules as to house allowance should be revised on the lines indicated (paragraph 69).

(*xxvi*) A Burma allowance should be given on the terms stated (paragraph 70).

(*xxvii*) Free passages should be given to officers of the services specified (paragraph 71).

(*xxviii*) Inefficient officer should be compulsorily retired (paragraph 72).

(*xxix*) Officers who are subject to the operation of article 459 of the civil service regulations should be retired at the age of 55, unless Government, in their sole discretion, decide to grant an extension of service (paragraph 73).

(*xxx*) There should be separate European service and Indian service leave rules to regulate the taking of long leave. Speaking generally, officers recruited under European conditions of salary should be subject to the European, and others to the Indian service leave rules (paragraphs 77 and 78).

(*xxxi*) The European service leave rules should be simplified, and greater facilities for leave on higher pay should be given by allowing privilege leave to be accumulated up to four months and furlough to be commuted subject to the restrictions stated (paragraphs 79 and 80).

(*xxxii*) The sterling amounts of the allowances payable under the European service

leave rules should stand to the rupee amounts in the proportion of 18 to 16 (paragraph 81).

(*xxxiii*) The Indian service leave rules should be simplified; officers subject to them should be allowed to accumulate privilege leave up to four months, and the allowances permissible should be increased to the extent stated (paragraphs 82 and 83).

(*xxxiv*) The rules relating to study leave should be revised; the arrangements for deputing officers to study particular problems should be made more elastic, and facilities should be given to officers on leave to study voluntarily such problems as interest them (paragraphs 84 to 86).

(*xxxv*) With the exceptions specified all officers should be under the same pension rules; all should serve normally for thirty years, but those recruited after the age of twenty-five in the services noted should be granted the concessions indicated, and all should be able to retire optionally on a reduced pension after twenty-five years' service. Government should be able to retire any officer after this period (paragraphs 87 to 91).

(*xxxvi*) The maximum limits of pension should be increased on the conditions stated and special additional pensions of amount stated should be drawn by the officers noted (paragraphs 92 and 93).

(*xxxvii*) A scheme for a general family pension fund, or for separate funds for different classes of officers, should be worked out on a self supporting basis (paragraph 96).

Temporary Provisions.

In October, 1915, a Bill was introduced into the House of Lords, entitled "An Act to enable persons during the continuance of the War, and for a period of two years thereafter, to be appointed or admitted to the Indian Civil Service without examination." The following is the text of its provisions:—"(1) The Secretary of State in Council may with the advice and assistance of the Civil Service Commissioners make rules providing for the admission and appointment to the Indian Civil Service by the Secretary of State in Council, during the continuance of the present war and for a period not exceeding two years thereafter, of British subjects possessing such qualifications with respect to age and otherwise as may be prescribed by the rules, notwithstanding that they have not been certified as being entitled for appointment as the result of examination in accordance with the regulations and rules made under section thirty-two of the Government of India Act, 1858, and section ninety-seven of the Government of India Act, 1915: Provided that—(*a*) not less than one-fourth of the persons admitted to the Indian Civil Service during such period as aforesaid shall be persons who have been so certified as aforesaid; and (*b*) a person shall not be appointed to the Indian Civil Service under the rules made under this section unless the Civil Service Commissioners certify that by such means as may be prescribed by the rules they have satisfied themselves that in their opinion he possesses the necessary educational qualifications.

The provisions as to the laying before Parliament of regulations and rules made under the said sections thirty-two and ninety-seven shall apply to the rules made under this section.

This Act may be cited as the Indian Civil Service (Temporary Provisions) Act, 1915."

In the **debate on the second reading** of the Bill, Lord Islington explained that this was an emergency Bill introduced to meet the difficulties created by war conditions. Government asked Parliament to authorise the suspension of the statutory system of open competition on two grounds. They wished to prevent any deterioration in the class of officers to be recruited for the I.C.S. and they sought power to provide a method by which those who were fighting at the front should as far as possible be protected from losing their careers as Indian Civil Servants owing to their patriotic action. The Bill sought to secure those ends. Government was anxious that no injustice should be done to Indians and therefore contemplated that, if with the examination of one-fourth there was not as a result the same **proportion of Indians** successful as had been the case in former years, that number would be made up by selection hereafter. Provision for this was to be included in the rules formulated to give effect to the Bill. In the debate which followed Lord Macdonnell argued that the process of selection in the case of Indians could be far better carried out in India than in Whitehall. The work, he said, naturally fell within the functions of the Viceroy, who could command the best information as to the relative merits of candidates, and in India where the field of choice would be so much wider. Lord Islington argued in reply that the unsuccessful Indian candidates had a right to be considered. Lord Macdonnell further raised the question of the composition of the Selection Board and moved an amendment under which the board would consist of not more than nine members, including the First Civil Service Commissioner, a member of authority in public affairs, and representatives of the Universities and the public schools. On the suggestion of Lord Sydenham, he added that there should be at least one member with a knowledge of India. By an amended sub-section it has been provided that no person shall be appointed to the I.C.S. unless the Secretary of State, acting with the advice of the Civil Service Commissioners, is satisfied that he possesses the necessary educational qualification. The design is to check any arbitrary use of the powers of the Secretary of State, and to prevent favouritism toward the unfit.

THE INDIAN MEDICAL SERVICE.

The Medical Service under the control of the Government of India consists of some seven hundred and sixty-eight medical men recruited in England by competitive examination: and has as its primary duty the care of the native troops and of the British Officers and their families, attached to them. But in the course of rather more than a century and a half other duties and responsibilities have accrued to it, so that there are in addition the provision of medical aid to Civil Servants and their families, the administration of the civil hospitals of the large towns, and the supervision of the numerous small dispensaries provided either by the Government or private charity for the inhabitants of the larger villages. Moreover, the Service provides for the sanitary control of large areas, dealing with the sanitation of towns, protection of water supplies and the prevention of epidemic disease. It is also represented in the Native States by the Residency Surgeon, and in Persia by the Medical Officers to the British Consulates. The Jail Department is also administered in great part by Indian Medical Officers, generally in the dual capacity of Medical Officer and Superintendent; and up to quite recently the Officers in the Mints have been recruited from members of the medical profession. Lastly, the Service provides the men who are engaged in original research on diseases of tropical importance at the Bacteriological Laboratories which have arisen in India during the last fifteen years, and others who as Professors at the large medical schools have had the task of creating an indigenous medical profession which will make permanent throughout the Indian Empire the civilising influence of Western Medicine.

This remarkable combination of duties and responsibilities in a single Service has slowly evolved from the system, initiated in quite early days by the old East India Company, of providing "Chirurgeons" from England, on the nomination of the Board of Directors in London, for the care of the people and soldiers in the Indian "Factories," and on the ships trading with the East. Besides these men the Company maintained several medical services, including those of St. Helena, the West Coast of Sumatra, Prince of Wales Island, and the China Coast. The Surgeons on the Company's Indiamen were frequently utilised for emergent work in India, as in the case of the Mahratta War of 1780 and other military operations of that time, for duty with troops, and sometimes to fill vacancies occurring among those who would now be styled "civil surgeons."

Organisation.—The Indian Medical Service practically dates from the year 1764 when the scattered medical officers serving in India were united into one body: later, this was divided into the three medical "Establishments" of Bengal, Madras, and Bombay. In 1766, the Medical Service was divided into two branches, military and civil, the latter being regarded as primarily army medical officers, lent temporarily for civil duties, in which they formed a reserve for the Indian Army, and were consequently liable to recall at any time. This position was confirmed by the Council of Lord Cornwallis in 1788; and has been in existence ever since with great advantage to the military authorities in times of military stress. In 1898 the officers of the Service were given military rank, and since 1906 all the names have been borne on one list, though men on entering the service are allowed to elect a Presidency in which they will serve on entering the Civil Department.

The Service was thrown **open to Indians** by the India Act of 1853, the first competitive examination being held in January 1855, when the list was headed by a Bengalee student who subsequently attained distinction. It was calculated by Lt.-Col. Crawford, I.M.S., (the talented historian of the Service) that from January 1855 to the end of 1910, eighty-nine men of pure Indian extraction had entered the Service. The proportion now shows signs of yearly increase. The total number of Indians at present in the Service is a little more than five per cent of the whole: while, of the successful candidates during the past five years, 17·6 per cent. have been men born and bred in the country.

Method of Entry.—Entrance into the Service is now determined on the results of competitive examinations held twice a year in London, the Regulations regarding which, and the rates of pay, rules for promotion and pension relating thereto, may be obtained on application to the Military Secretary at the India Office. Candidates must be natural-born subjects of His Majesty, of European or East Indian descent, of sound bodily health, and, in the opinion of the Secretary of State for India in Council, in all respects suitable to hold commissions in the Indian Medical Service. They may be married or unmarried. They must possess, under the Medical Acts in force at the time of their appointment, a qualification registrable in Great Britain and Ireland. No candidate will be permitted to compete more than three times. Candidates for the January examination in each year must be between 21 and 28 years of age on the 1st February in that year, and candidates for the July examination must be between 21 and 28 years of age on the 1st August.

The candidate will be examined by the Examining Board in the following subjects, and the highest number of marks obtainable will be distributed as follows:—

(1) Medicine, including Therapeutics	1,200	Marks.
(2) Surgery, including diseases of the eye	1,200	,,
(3) Applied Anatomy and Physiology	600	,,
(4) Pathology and Bacteriology	900	,,

(5) Midwifery and Diseases of Women and Children ..	600 Marks.
(6) Materia Medica, Pharmacology and Toxicology..	600 ,,

N.B.—The Examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside.

Having gained a place at the entrance examination, the successful candidates will be commissioned as Lieutenants on probation, and will be granted about a month's leave. They will then be required to attend two successive courses of two months each at the Royal Army Medical College, and at Aldershot respectively.

Officers appointed to the Indian Medical Service will be placed on one list, their position on it being determined by the combined results of the preliminary and final examinations. They will be liable for military employment in any part of India, but with a view to future transfers to civil employment, they will stand posted to one of the following civil areas:—(1) Madras and Burma, (2) Bombay, with Aden; (3) Upper Provinces, *i.e.*, United Provinces, Punjab and Central Provinces; (4) Lower Provinces, *i.e.*, Bengal, Bihar and Orissa and Assam.

The allocation of officers to these areas of employment will be determined upon a consideration of all the circumstances, including as far as possible the candidate's own wishes.

The whole course lasts for four months, after which the duly gazetted Lieutenants proceed to India, and for the first years of their service are attached to native regiments in any part of the country. The doctor is an officer of the regiment, as was the case in the old days of the Army Medical Department. Of late years it has been proposed to form the members of the Service into a corps on the lines of the British Medical Service, by forming station hospitals for native troops, thereby releasing the doctor from regimental life. This reform appears to have fallen through for the present, but is likely to be brought into operation within a very few years. Several appointments in the Civil Department are now reserved for Indians recruited in the country.

Organisation.—The Head of the Service is the Director General, who is an official of the Government of India and its adviser on medical matters. He is also concerned with questions of promotion of officers to administrative rank, and of the selection of men for admission to the civil department. Attached to his office and under his general supervision is the Sanitary Commissioner with the Government of India, who is to have the control of the new Sanitary Service, a department which is undergoing enlargement and re-arrangement. In each Presidency or Province there is a local head of the civil medical service and medical adviser of the local administration, who is either a Surgeon General, or an Inspector of Civil Hospitals of the rank of Colonel. The medical service in each province consists of the Sanitary Branch and the purely professional. The former is composed of Sanitary Commissioners of Districts, who by keeping large tracts of country under observation are in a position to advise their respective governments of the existence of epidemics, and on the proper methods of dealing with them and of preventing their spread. It is, however, through the Civil Surgeon that the visitor to India will come in contact with the Service. This official is something more than a general practitioner, as he is expected to be the leading medical and surgical authority in a large district consisting of a million of more of souls. Owing to the varied experience obtained in India by the members of the Civil Medical Department, this official is generally a man of the highest professional attainments, especially so in the case of those senior men holding appointments in the larger towns. His duties are to give medical aid to the civil servants and treat families, and to administer the hospital which has been provided by Government in each headquarter town. In many cases too he will have the additional charge of the local jail, and be the Sanitary Adviser of the Municipality. Accustomed to meet the most serious emergencies of his profession, and to rely entirely on his own skill and judgment, the Civil Surgeon in India has given to the Indian Medical Service a reputation for professional efficiency which cannot be excelled by any other public medical service. Travellers in India falling sick within call of any of the larger towns can therefore rely on obtaining the highest professional skill in the shape of the ordinary Civil Surgeon of the I. M. S. There have lately been signs that the popularity of the medical service of India is waning in the medical schools of the United Kingdom, and consequently there is a suspicion that a class of man is now entering it of a somewhat lower type than that which has made the Service famous.

A Parliamentary Paper containing correspondence between the Government of India and the Secretary of State, on the promotion of an **independent medical profession** in India and the possibility of limiting or reducing the cadre of the Indian Medical Service, was published during 1914. Writing in 1910, the Government of India said that it was impracticable to make any reduction in the number of Indian Medical Service officers employed solely on civil duties, that is to say, those not belonging to the war reserve. An independent profession trained on western lines was growing up in India but had to overcome its universal rival in the shape of *hakims* and others trained in indigenous methods: Government could do much to encourage the growth of this profession by making provision for the registration of medical practitioners qualified according to western methods. The Secretary of State, replying in November 1912, said that he was unable to contemplate any substantial reduction in the Indian Medical Service. As for the independent profession, he trusted that the experience of the working of the Bombay Registration Act might justify the introduction of similar legislation for other Provinces. He considered that the Indian Medical Service should be restricted to the military needs of

the country both on account of economy and in order to increase as far as possible the number of important posts held by Indians; he was prepared to consider each new appointment on its merits, but any proposal for an increase in the civil posts included in the cadre of the Indian Medical Service would be subjected to the closest scrutiny. In reply to that despatch, the Government of India wrote in March, 1914:—"In view of the growing medical needs of the country which necessitate the employment of a larger staff of medical officers, some expansion of the Indian Medical Service is inevitable, and such expansion should not, in our opinion, be regarded from a different standpoint from the enlargement of any other cadre in response to the development of the work to be performed."

Pay and Allowance.—The following are the monthly rates of Indian pay drawn by officers of the Indian Medical Service when employed on the military side:—

Rank.	Unemployed Pay.	Grade Pay.	Staff Pay.	In Officiating Medical Charge of a Regiment.	In Permanent Medical Charge of a Regiment.
	Rs.	Rs.	Rs.	Rs.	Rs.
Lieutenant	420	350	150	425	500
Captain	475	400	150	475	550
„ after 5 years' service	475	450	150	525	600
„ after 7 years' service	..	500	150	575	650
„ after 10 years' service	..	550	150	625	700
Major	..	650	150	725	800
„ after 3 years' service as Major	..	750	150	825	900
Lieutenant-Colonel	..	900	350	1,075	1,250
„ „ after 25 years' service ..	..	900	400	1,100	1,300
„ „ specially selected for increased pay.	..	1,000	400	1,200	1,400

Pensions and Half-Pay.—Officers are allowed to retire on pension on completing 17 years' service, the amount they receive varying with the precise number of years they have served. The lowest rate for 17 years' service is £300 per annum, and the rate for 30 years £700 per annum. The increases in pension for each additional year's service over 17 are somewhat higher in the last 5 than in the first 8 of the 13 years between the shortest and longest periods of pensionable service. All officers of the rank of lieutenant-colonel and major are placed on the retired list on attaining the age of 55 years: the greatest age to which any officer can serve being 62.

Principal Civil Appointments.	Approximate Number of Appointments in each Class.	Salary per Mensem. When held by a Lieutenant-Colonel.	When held by a Major.	When held by Captain.	When held by Lieutenant.
		Rs.	Rs.	Rs.	Rs.
Inspectors-General of Civil Hospitals ..	6	2,250–2,500			
Sanitary Commissioner with Government of India	1	2,000–2,500			
Inspectors-General of Prisons	8	1,500–2,000			
Principals of Medical Colleges	5	1,650–1,800	1,200–1,300		
Professorial Appointments	32	1,500–1,650	1,050–1,150	800–950	750
Sanitary Commissioners	8	1,250–1,800	for all ranks.		

Pensions and Half-Pay—*contd.*

Principal Civil Appointments.	Approximate Number of Appointments in each Class.	Salary per Mensem.			
		When held by a Lieutenant-Colonel.	When held by a Major.	When held by Captain.	When held by Lieutenant.
Deputy Sanitary Commissioners ..	13	1,450–1,600	1,000–1,100	750–900	700
Bacteriological Appointments	11	1,500–1,600	1,050–1,150	700–900	650
Superintendents of Central Lunatic Asylums	6	1,400–1,550	1,050–1,150	700–900	650
Superintendents of Central Gaols.. ..	31	1,300–1,550	850–1,050	600–850	550–650
Civil Surgeoncies (First Class)	37	1,300–1,450	850–950	600–750	550
Civil Surgeoncies (Second Class)	171	1,200–1,350	750–850	500–650	450
Probationary Chemical Examiner ..	1	....	....	600–750	550
Officers deputed to Plague Duty ..	20	1,450	1,000–1,100	750–900	700

PUBLIC WORKS DEPARTMENT.

In November, 1916, a committee of inquiry was appointed, under the presidency of Mr. F. G. Sly, I.C.S., to investigate the organisation and system of administration of the Buildings and Roads Branch of the Public Works Department. The Committee is instructed to inquire into the following, among other points:—

(1) Whether the methods at present adopted for the execution of civil works are economical and suitable for the purpose for which they were devised.

(2) Whether under the existing system private enterprise is sufficiently encouraged and whether it is possible and desirable to entrust the construction and upkeep of certain classes of public works to an agency other than departmental, and if so upon what lines such change should be effected.

(3) Whether any changes recommended by the committee necessitate any modification of the organisation of the staff of the Public Works Department, and if so what.

(4) Whether the Public Works Department meets the needs of other departments of administration and whether the relations *inter se* of the various sub-divisions of the Buildings and Roads Branch,—sanitary, architectural, electrical and civil engineering are satisfactory.

(5) Whether further decentralisation within the Public Works Department itself is desirable, and if so to what extent and in what directions.

(6) Whether the Public Works Department Code, which regulates the execution and maintenance of civil works, is unduly restrictive and if so in what direction a change is desirable.

(7) Whether the system of education in Government engineering colleges is organised on a sufficiently broad basis to meet the needs of private agency, as well as of Government; whether it attracts suitable candidates and whether the standard of instruction is sufficiently advanced to provide fully qualified civil engineers for employment by Government, local bodies, and private engineering and contracting firms, and if not in what directions and to what extent improvement is required.

(8) Whether adequate provision is made for the practical training on works of students who have received their scientific education in English or Indian colleges.

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Pilot Services.

Appointments to the Bengal Pilot Service are made by the Secretary of State for India and by the Government of Bengal; the latter appointments are limited to Anglo-Indians and Eurasians, and are made under separate regulations. In the case of appointments made by the Secretary of State, preference is given, *caeteris paribus*, to candidates who have passed through one of the training ships "Worcester" and "Conway."

Candidates for the Secretary of State's appointments must not be less than 18 and not more than 22 years of age. They must produce a Board of Trade or Colonial Certificate of Competency as a Second Mate, or any higher grade, for a foreign-going ship, and evidence of having served at sea not less than two years in a square-rigged sailing vessel of over 300 tons. The rates of pay and allowances of Leadsmen Apprentices while on duty are as follows, without exchange compensation allowance:—

When on the running list:—

	Rs.	
Junior Leadsmen ..	..107 a month	Plus 50 per cent. of the lead money collected from the ships on which they do duty.
Second Mate Leadsmen	..135 a month	
First Mate Leadsmen ..	..160 a month	

When employed as Chief and Second Officer:—Chief Officers of pilot vessels, Rs. 160 a month.

As Second Officers of pilot vessels .. Rs. 135 a month.

Plus a mess allowance of Rs. 40 a month.

After five years' service a **Leadsman** Apprentice is allowed to appear at an examination to qualify him for appointment as **Mate Pilot**, but if he shows exceptional ability, and has passed each previous examination on his first attempt, bears a very good character, and is otherwise well reported on, this period may, with the special sanction of Government, be reduced to 4½ years. After three years' service as Mate Pilot, he is permitted to go up for an examination to qualify for appointment as **Master Pilot**, and, if successful, is promoted to that grade on the occurrence of a vacancy. Vacancies which occur in the grade of Branch Pilot are filled by promotion from the Master Pilots' grade, of men who have passed the Branch Pilots' examination. If the Local Government has reason to believe that a Pilot is, owing to physical unfitness of any kind, incapable of discharging his duties properly, it arranges for his medical examination and takes such action as may seem desirable when the results of that examination are communicated. In particular, Pilots are medically examined after the occurrence of any accident to the vessel in their pilotage charge, if the circumstances tend to show that the accident was in any way attributable to physical unfitness on the part of the Pilot.

Pilots are not entitled to any salary while on pilotage duty, but receive as their remuneration a share, at present 50 per cent., but liable to alteration at the discretion of the Government of Bengal, of the pilotage dues paid by ships piloted by them. The Government of Bengal reserves to itself the right to require all Pilots to obtain a Home Trade Master Mariner's Certificate before they are promoted to be Senior Master Pilots. Every member of the Pilot Service is subject to such rules as the Government of India or as the Government of Bengal under the control of the Government of India, may from time to time, respectively, make in regard to discipline, leave, leave allowances, number of officers in the service, distribution into grades, tonnage of ships to be allotted to the several grades, etc., and in all respects he is amenable to such orders as may be passed by the Government of Bengal, and is liable to degradation, suspension and dismissal by the Government of Bengal for any breach of such rules or orders, or for misconduct.

Other Pilot Services.—Bengal is the only province that has a covenanted pilot service: elsewhere pilotage is under the control of the local Port Trust. In **Bombay**, for example, the Port Trust have drawn up the following rules for entry into the service:

To be eligible for admission to the Bombay Pilot Service, candidates must be British Subjects, and at least 21 years of age but not more than 32. They must hold certificates of competency as Master and excellent testimonials as regards conduct, character and ability. They will be examined in the Port Office for form and colour vision as prescribed by the Board of Trade, and also an extra form vision test of each eye separately and must undergo an examination by, and produce a certificate from, the Medical Officer appointed by the Port Trustees that they are physically fit, and are of a sufficiently hardy or strong constitution to perform a Pilot's duty and that they, to all appearance, enjoy good health. Any Probationer may, with the sanction of the Port Officer, go before the Examining Committee, and if he passes he will be eligible for appointment as a 3rd Grade Pilot when a vacancy occurs. A Probationer, not passing the required examination to qualify for performing a Pilot's duties within six months after the date of his appointment, is liable to be struck off the list. Promotion to the various grades in the Pilot service is generally given by seniority, but the Port Trustees reserve to themselves the right of passing over any Pilot. There are 18 Pilots, six in each grade, who are paid according to the number of vessels piloted. The average pay of a 1st Grade Pilot is about Rs. 850, 2nd Grade about Rs. 750 and 3rd Grade about Rs. 650.

The Press.

The newspaper Press in India is an essentially English institution and was introduced soon after the task of organising the administration was seriously taken in hand by the English in Bengal. In 1773 was passed the Regulating Act creating the Governor-Generalship and the Supreme Court in Bengal and within seven years at the end of the same decade, the first newspaper was started in Calcutta by an Englishman in January 1780. Exactly a century and a third has elapsed since, not a very long period certainly, a period almost measured by the life of a single newspaper, *The Times*, which came into existence only five years later in 1785; but then the period of British supremacy is not much longer, having commenced at Plassey, only twenty-three years earlier. Bombay followed Calcutta closely, and Madras did not lag much behind. In 1789 the first Bombay newspaper appeared, *The Bombay Herald*, followed next year by *The Bombay Courier*, a paper now represented by *the Times of India* with which it was amalgamated in 1861. In Bombay the advent of the press may be said to have followed the British occupation of the island much later than was the case in Calcutta. In Calcutta the English were on sufferance before Plassey, but in Bombay they were absolute masters after 1665, and it is somewhat strange that no Englishman should have thought of starting a newspaper during all those hundred and twenty-five years before the actual advent of *The Herald*.

The first newspaper was called *The Bengal Gazette* which is better known from the name of its founder as *Hicky's Gazette* or *Journal*. Hicky like most pioneers had to suffer for his enterprising spirit, though the fault was entirely his own, as he made his paper a medium of publishing gross scandal, and he and his journal disappeared from public view in 1782. Several journals rapidly followed Hicky's, though they did not fortunately copy its bad example. *The Indian Gazette* had a career of over half a century, when in 1833 it was merged into the *Bengal Harkarn*, which came into existence only a little later, and both are now represented by *The Indian Daily News* with which they were amalgamated in 1866. No fewer than five papers followed in as many years, the *Bengal Gazette* of 1780, and one of these, *The Calcutta Gazette*, started in February 1784, under the avowed patronage of Government, flourishes still as the official gazette of the Bengal Government.

From its commencement the press was jealously watched by the authorities, who put serious restraints upon its independence and pursued a policy of discouragement and rigorous control. Government objected to news of apparently the most trivial character affecting its servants. From 1791 to 1799 several editors were deported to Europe without trial and on short notice, whilst several more were censured and had to apologise. At the commencement of the rule of Wellesley, Government promulgated stringent rules for the public press and instituted an official censor to whom everything was to be submitted before publication, the penalty for offending against these rules to be immediate deportation. These regulations continued in force till the time of the Marquis of Hastings who in 1818 abolished the censorship and substituted milder rules.

This change proved beneficial to the status of the press, for henceforward self-respecting and able men began slowly but steadily to join the ranks of journalism, which had till then been considered a low profession. Silk Buckingham, one of the ablest and best known of Anglo-Indian journalists of those days, availed himself of this comparative freedom to criticise the authorities, and under the short administration of Adam, a civilian who temporarily occupied Hasting's place, he was deported under rules specially passed. But Lord Amherst and still more Lord William Bentinck were persons of broad and liberal views, and under them the press was left practically free, though there existed certain regulations which were not enforced, though Lord Clare, who was Governor of Bombay from 1831 to 1835, once strongly but in vain urged the latter to enforce them. Metcalfe who succeeded for a brief period Bentinck, removed even these regulations, and brought about what is called the emancipation of the press in India in 1835, which was the beginning of a new era in the history of the Indian press. Among papers that came into being, was the *Bombay Times* which was started towards the close of 1838 by the leading merchants of Bombay, and which in 1861 changed its name to the *Times of India*. *The Bombay Gazette*, founded in 1791, ceased publication in 1914.

The liberal spirit in which Lord Hastings had begun to deal with the press led not only to the improvement in the tone and status of the Anglo-Indian press, but also to the rise of the Native or Indian Press. The first newspaper in any Indian language was the *Samachar Durpan* started by the famous Serampore Missionaries Ward, Carey and Marshman in 1818 in Bengali, and it received encouragement from Hastings who allowed it to circulate through the post office at one-fourth the usual rates. This was followed in 1822 by a purely native paper in Bombay called the *Bombay Samachar* which still exists, and thus was laid the foundation of the Native Indian Press which at the present day is by far the largest part of the press in India, numbering over 650 papers.

From 1835 to the Mutiny the press spread to other cities like Delhi, Agra, Gwalior, and even Lahore, whereas formerly it was chiefly confined to the Presidency towns. During the Mutiny its freedom had to be temporarily controlled by the Gagging Act which Canning passed in June 1857 on account of the license of a very few papers, and owing still more to the fears of its circulating intelligence which might be prejudicial to public interests. The Act was passed only for a year at the end of which the press was once more free.

On India passing to the Crown in 1858, an era of prosperity and progress opened for the whole country in which the press participated. There were 19 Anglo-Indian papers at the beginning of this period in 1858 and 25 Native papers and the circulation of all was very small. The number of the former did not show a great rise in the next generation, but the rise in in-

fluence and also circulation was satisfactory. Famous journalists like Robert Knight, James Maclean and Hurris Mookerji flourished in this generation. The *Civil and Military Gazette* was originally published in Simla as a weekly paper, the first issue being dated June 22nd, 1872. Prior to and in the days of the Mutiny the most famous paper in Northern India was the *Mofussilite*, originally published at Meerut, but afterwards at Agra and then at Ambala. After a lively existence for a few years in Simla the *Civil and Military Gazette* acquired and incorporated the *Mofussilite*, and in 1876 the office of the paper was transferred from Simla to Lahore, and the *Gazette* began to be published daily. During Lord Lytton's viceroyalty a reactionary policy was pursued towards the vernacular press which was restrained by a special Act passed in 1878. With the advent of Lord Ripon in 1880, the Press Act of Lytton was repealed in 1882. The influence of the native press especially grew to be very great, and its circulation too received a great fillip. This may be said to have gone on till 1897, when India entered upon a disastrous cycle of years during which plague and famine gave rise to grave political discontent which found exaggerated expression in the native press, both in the vernacular and in English. The deterioration in the tone of a section of the press became accentuated as years went on and prosecutions for sedition had little effect in checking the sinister influence.

In 1910 Lord Minto passed a Press Act applicable, not like Lytton's Act, to the peccant part alone, but like Canning's measure, to the entire press. This measure is having the desired effect inasmuch as it has undoubtedly checked seditious writing in all the provinces where it had previously been most rife. One marked effect of the Act has been to increase the influence and circulation of the moderate papers. There is some tendency, as in Eastern Bengal, to evade the Act by the secret production and dissemination of seditious leaflets.

Number of Printing Presses at Work, and Number of Newspapers, Periodicals, and Books Published.

Province.	Printing Presses.	Newspapers.	Periodicals.	Books.	
				In English or other European Languages.	In Indian Languages (Vernacular and Classical) or in more than one Language.
Bengal	758	157	206	385	2,177
Bihar and Orissa	136	22	34	92	819
United Provinces	547	107	212	249	1,788
Punjab	257	94	113	133	1,526
Delhi	52	11	14	17	188
North-West Frontier Province	20	(*a*) 2	1	....	....
Burma	157	49	60	23	223
Central Provinces and Berar	84	15	14	3	100
Assam	89	14	10	7	83
Ajmer-Merwara	12	2	6	1	62
Coorg	1	....	1	....	....
Madras	681	(*b*)242	1,747	494	1,927
Bombay	493	142	509	137	1,765
Total, 1915-16	3,237	857	2,927	1,541	10,658
Totals 1914–15	3,102	847	2,988	1,602	11,477
1913–14	3,020	827	2,848	1,477	10,712
1912–13	2,828	673	2,395	1,662	9,651
1911–12	2,780	656	2,268	1,596	9,988
1910–11	2,751	658	1,902	1,578	10,063
1909–10	2,736	726	829	2,112	9,934
1908–9	2,594	738	895	1,687	8,345
1907–8	2,571	753	1,062	1,524	7,095
1906–7	2,490	744	973	1,589	8,126
1905–6	2,380	747	793	1,411	7,644

(*a*) One ceased to appear in April 1915.

(*a*) For calendar year.

Newspapers and News Agencies registered under the Press Rules and arranged alphabetically according to Station where they are published and situated.

NOTE.—*News Agencies are distinguished by an asterisk.*

Stations.	Title in full.	Day of going to Press.
Agra	Agra Light	Daily.
	Kayastha Hitkari	1st, 8th, 16th, and 24th of every month.
Ahmedabad	Ahmedabad Samachar	Daily.
	Coronation Advertiser	Wednesdays.
	Gujarati Punch	Sundays.
	Jaina Samachar	Sundays.
	Kathiawar and Mahikantha Gazette.	Saturdays.
	Political Bhomiyo	Thursdays.
	Praja Bandhu	Saturdays.
	Rajasthan	Fridays.
Ajmer	Rajastan Samachar	Thursdays.
Akola, Berar	Berar Samachar	Sundays.
Akyab	Arakan News	Tuesdays and Fridays.
Aligarh	Aligarh Institute Gazette	Wednesdays
Allahabad	Abhyudaya	Fridays.
	Hindustan Review	On first of every month.
	Leader	Daily, except Tuesdays.
	Pioneer	Daily.
	Reuter's Telegram Company, Ld.	....
Allahabad Katra	Sarva Shikshall	....
Amraoti	Kartawya	Tuesdays.
	Pramod Sindhu	Mondays.
	Veer Shalo Sanjeevinee	Mondays.
	Bharat	Wednesdays.
Amreli	Islamic News	Mondays.
Amritsar	Khalsa Advocate	Weekly.
	Punjab Durban	Daily.
	Vakil	Bi-Weekly.
Amroha	Ittihad	Saturdays.
Bagerhat	Jagaran	Sundays.
Bangalore	Daily Post	Daily.
	Kasim-ul-Akhbar	Mondays and Thursdays.
Bankipore (Patna)	Behar Herald	Saturdays.
	Beharee	Daily.
	Express	Daily.
	Behar Bandhu	Fridays.
Barisal	Barisal Hitaishi	Sundays.
Baroda	Shree Sayaji Vijaya	Thursdays.
Bassein, Burma	Bassein News	Tuesdays and Fridays.
Batticaloa (Ceylon)	Lamp	Every other Saturday.
Belgaum	Belgaum Samachar	Mondays.
Benares City	Awazai Khalk	Every Wednesday.
	Bharat Jiwan	Sundays.
	Indian Student	27th of each month.
	"Hindi Kesari"	Fortnightly.
	Kashi Temperance Samachar	Monthly.
	Mahamandal Magazine	Monthly.

Stations.	Title in full.	Date of going to Press.
Bhavnagar	Jainhasan	Tuesdays.
	"Jaina"	Weekly.
Bihar (Patna)	Ittehad	Wednesdays.
Bijapur	Karnatak Vaibhav	Saturdays.
Bombay	Advocate of India	Daily
	Akhbar-i-Islam	Daily.
	Akhbar-i-Soudagar	Daily, except on Sundays.
	Andhra Patrika	Wednesdays.
	Argus	Sundays.
	Associated Press *	....
	Bombay Chronicle	Daily.
	Bombay Guardian	Fridays.
	Bombay Samachar	Daily.
	Briton	Daily, except Saturdays.
	Catholic Examiner	Thursdays.
	Dyan Prakash	Daily.
	Griffith's Telegram Company, Ld.	.....
	Gujarati	Saturdays.
	Illustrated Sporting Review ..	Saturdays.
	Indian Education	Monthly.
	Indian Industries and Power ..	On the 15th of each *month*.
	Indian Investors' Referee ..	Fridays.
	Indian National News Agency ..	.....
	Indian Social Reformer	Saturdays.
	Indu Prakash	Daily, except Sundays.
	Jaina	Saturdays.
	Jam-e-Jamshed	Daily, except Saturdays.
	Kaiser-i-Hind	Saturdays 24.
	Message	Daily.
	Muslim Herald	Daily, except Sundays.
	Muslim Times	Fridays.
	Native Opinion	Tuesdays.
	O Anglo-Lusitano	Saturdays.
	The Parsi and Praja Mitra ..	Daily.
	Railway Times	Fridays.
	Rast Goftar	Sundays.
	Reuter's Indian Journal	Daily.
	Reuter's Telegram Company, Ltd.	.....
	Sandesh	Daily.
	Sanj Vartaman	Daily, except Sundays.
	Shri Venkateshwar Samachar ..	Fridays.
	Times of India	Daily.
	Times of India Illustrated Weekly.	Wednesdays.
	Young India	Weekly.
	United Press Syndicate * ..	.....
Bowringpet	Kolar Gold Fields News	Tuesdays.
Budaon	Akhbor Zulqarnain	6th, 13th, 20th, and 27th of every month.
Calangute (Goa)	A Voz do Povo	Saturdays.

Stations.	Title in full.	Day of going to Press.
Calcutta	Albalagh	Fridays.
	Amrita Bazar Patrika	Daily.
	Asian	Fridays.
	Associated Press *	.....
	Bangabasi	Wednesdays.
	Bengalee	Daily, except Sundays.
	Bharata Mitra	Thursdays.
	Calcutta Intelligence Syndicate ..	.....
	Capital	Thursdays.
	Catholic Herald of India	Tuesdays.
	Collegian	Bi-Monthly.
	Dainik Hitabadi	Daily, except Wednesdays.
	Empire (Calcutta Evening News).	Daily, except Sundays.
	Englishman	Daily.
	Griffith's Telegram Company, Ld.	.....
	Hablul Matin	Daily, except Sundays.
	Hindoo Patriot	Daily, except Saturdays.
	Hitabadi	Wednesdays.
	Indian and Eastern Engineer ..	14th of each month.
	Indian Daily News	Daily, except Sundays.
	Indian Echo	Fridays.
	Indian Empire	Wednesdays and Saturdays.
	Indian Engineering	Thursdays.
	Indian Express	Once a month.
	Indian Field	Wednesdays.
	Indian Methodist Times	Last day of month.
	Indian Mirror	Daily.
	Indian Nation	Saturdays.
	Indian News Agency	.....
	Indian Planters' Gazette ..	Saturdays.
	Indian Public Health	15th of each month.
	Indo-British Press Agency ..	.....
	Mussalman	Thursdays.
	Moslem Chronicle and Muhammadan Observer.	Thursdays.
	Railways and Shipping	11th, 15th and last day of every month.
	Reis and Rayyet	Saturdays.
	Reuter's Telegram Company, Limited.	.....
	Sanjibani	Wednesdays.
	Samay	Wednesdays.
	Sidaqat	Daily.
	Statesman	Daily.
	Swadesh	Sundays.
	Tarjuman	Daily.
	Telegraph	.....
	Times of India Illustrated Weekly.	Wednesdays.
	United Press Syndicate*	.....
	Young Men of India	Monthly.

Stations.	Title in full.	Date of going to Press.
Calicut	Kerala Sanchari	Wednesdays.
	Manorama	Tuesdays and Fridays.
	Mitavadi	Daily.
	West Coast Reformer	Sundays and Thursdays.
	West Coast Spectator	Wednesdays and Saturdays.
Cawnpore	Azad	Wednesdays.
	Cawnpore Journal	Daily.
	Englishman Bulletin	Daily.
	Griffith's Telegram Co., Ltd. ..	.....
	Reuter's Telegram Company, Limited.	.....
	Zamana	25th day of every month.
Chinsurah	Education Gazette	Tuesdays.
Chittagong	Jyoti	Wednesdays.
Cochin	Cochin Argus	Saturdays.
	Malabar Herald	Saturdays.
Cocanada	Ravi'	Thursdays.
Colombo	Ceylon Catholic Messenger ..	Tuesdays and Fridays.
	Ceylon Independent	Daily.
	Ceylon Morning Leader	Daily.
	Ceylon Observer	Daily.
	Ceylon Sportsman	Saturdays.
	Ceylonese	Daily.
	Dinakara Prakash	Mondays, Tuesdays, Thursdays and Saturdays.
	Dinamina	Daily, except Sundays.
	Dravida Mitran	Wednesdays and Saturdays.
	Islam Mittiran	Saturdays.
	Nanartha Pradipaya	Mondays and Thursdays
	Sarasavi Sandaresa	Tuesdays and Fridays.
	Sihala Samaya	Mondays and Thursdays.
	Sinhala Bauddhaya	Saturdays.
	Times of Ceylon	Daily.
Cuttack	Utkal Deepica	Fridays.
Contai	Nihar	Mondays.
Dacca	Dacca Gazette	Mondays.
	Dacca Prakash	Sundays.
	East	Sundays.
	Herald	Daily.
Darjeeling	Darjeeling Visitor and Advertiser	Mondays.
	Indian Daily News (Darjeeling Edition).	Daily.
Dehra Dun	Bulletin	Twice Daily
Delhi	Al-Mustansir	Daily.
	Associated Press	.....
	Durbar Bulletin	Daily.
	Griffith's Telegram Co., Ltd. ..	.....
	Hamdard	Daily. .....
	Indian News Agency	
	Morning Post	Daily, except Sundays.
	Pioneer Supplement	Daily.
Dharwar	Dharwarvritt	Wednesdays.
	Karnataka Patra	Fridays.
	Karnatakavritta and Dhananjaya	Tuesdays.
	Kshema Samachar	Thursdays.
	Raja Hansa	Daily.

Stations.	Title in full.	Day of going to Press.
Dhulia	Khandesh Vaibhav	Fridays.
Dibrugarh ..	Times of Assam	Fridays.
	Englishman Bulletin	Daily.
Gaya	Kayastha Messenger	Sundays.
Guntur	Deshabimani	Daily.
Hubli	Kannad Kesari	Fridays.
Hyderabad, Deccan	Musheer-i-Deccan	Daily.
	Sahifa-i-Rozana	Daily.
	Usman Gazette	Daily.
Hyderabad, Sind ..	Hindvasi	Daily.
	Musafir	Saturdays.
	Sind Journal	Wednesdays.
	Sind Mail	Daily.
	Sindvasi	Daily.
Jaffna	Ceylon Patriot and Weekly Advertiser.	Tuesdays.
	Jaffna Catholic Guardian	Saturday Mornings.
	Vasavilan Jaffna	.....
	Native Opinion	Fortnightly
	Sithia Veda Pathukavalan ..	Fortnightly.
Jaffna (Vannarponnai) ..	Hindu Organ	Mondays and Thursdays.
Jorhat	Englishman Bulletin	.....
Jubbulpore ..	India Sunday School Journal ..	Third Thursday of every month.
	C. P. Standard	Daily.
Kakina	Rangpur-Dikprokash	Fridays.
Kankhal	Saddhram Pracharak	Tuesdays.
Karachi	Daily Gazette	Daily.
	Karachi Argus	Wednesdays.
	Karachi Chronicle	Saturdays.
	Parsi Sansar	Saturdays.
	Praja Mitra	Tuesdays and Fridays.
	Phœnix	Tuesdays and Fridays.
	Reuter's Telegram Company, Limited.	....
	Sind Observer	Wednesdays and Saturdays.
	Sind Sudhar	Saturdays.
	Star of India	Saturdays.
Khulna	Khulna Basi	Saturdays.
Kolhapur City	Vidyavilas	Fridays.
Kottayam	Malayala Manorama	Wednesdays and Saturdays.
	Nazrani Deepka	Tuesdays.
Kurunegala	Abhinawa Kawata Angana ..	Days prior to the 1st and 15th of every month.
Lahore	Akhbar-i-Am	Daily.
	Arya Patrika	Saturdays.
	Associated Press	.....
	Bulletin	.....
	Civil and Military Gazette ..	Daily, (Sundays excepted).
	Desh	Daily

Stations.	Title in full.	Day of going to Press.
Lahore	Dipak	Daily (except Wednesdays.)
	Hindu	Tuesdays.
	Hindustan	Wednesdays.
	Paisa Akhbar	Daily.
	Punjabee	Tuesdays, Thursdays and Saturdays.
	Punjab Observer	Wednesdays and Saturdays.
	Punjab Samachar	Fridays.
	Rajput Gazette	1st, 8th, 16th and 24th of every month.
	Reuter's Telegram Company, Limited.	.....
	Tribune	Daily, except Sundays.
	Urdu Bulletin	Daily.
	Watan	Thursdays.
	Zamindar	Daily.
Larkana	Khairkhah	Saturdays.
	Larkana Gazette	Fridays.
	Sind Patrika	Saturdays.
Lucknow	Advocate	Wednesdays and Saturdays.
	Anand	Thursdays.
	Indian Daily Telegraph	Daily.
	Indian Witness	Wednesdays.
	Kaukab-i-Hind	Wednesdays.
	Kayastha Mutual Family Pension Fund News.	15th day of every month.
	Muslim Gazette	Tuesdays.
	Oudh Akhbar	Daily, except Sundays.
	Loyal Akhbar	Wednesdays and Saturdays.
Madras	Al-Mazmun	On the first of every month.
	Andhra Patrika	Tuesdays.
	Anglo-Indian	Thursdays.
	Associated Press	.....
	Hindu—See against *Mount Road*	.....
	Indian Patriot	Daily.
	Indian Railway Journal	15th of every month.
	Jarida-i-Rozgar	Saturdays.
	Justice	Daily.
	Law Times	Saturdays.
	Madras Mail	Daily.
	New India	Daily.
	Madras Times	Daily, except Saturdays.
	Muhhammadan	Mondays and Thursdays.
	Mukhbir-i-Deccan	Wednesdays.
	Reuter's Telegram Company, Limited.	.....
	Shamshul Akhbar	Mondays.
	Swadesa Mitran	Daily.
	United Press Syndicate, Madras Agency.	.....
Madura	South Indian Mail	Mondays.
Mandalay	Burma Magnet	Saturdays.
	Upper Burma Gazette	Daily.
Mapuca	Futuro	Daily.
Margao (Goa) ..	Noticias	Mondays.
	Ultramar	Mondays and Fridays.

Stations.	Title in full.	Day of going to Press.
Matheran	Matheran Jottings	Tuesdays and Fridays.
Mattancheri	Chakravarthi	Saturdays.
Mirpurkhas	Mirpurkhas Gazette	Wednesdays.
	Zamindar Gazette	Thursdays.
Mirzapur City	Khichri Samachar	Saturdays.
Moradabad ..	Al-Musher	4th, 11th, 18th, 25th of every month.
	Colonel	1st, 8th, 16th and 24th of every month.
	Meston News	4th, 12th, 20th and 28th of every month.
	Sitara-i-Hind	4th, 12th, 20th and 28th of every month.
Moulmein	Moulmein Advertiser	Daily.
	Rammenna Times	Tri-Weekly.
Mount Road, Madras ..	Hindu	Daily, except Sundays.
Mussoorie ..	Pioneer Mussoorie Bulletin ..	Daily.
	Mussoorie Times	Thursdays.
Muttra	Inniskilliner	7th of each month.
Muvattupuzha	Kerala Dheepika	Saturdays.
Mymensingh	Charu Mihir	Tuesdays.
Nagercoil	Travancore Times	Tuesdays.
Nagpur	Desha-Sewak	Mondays.
	Nagpur and Berar Times ..	Fridays.
	Hitavada	Fridays.
	Maharashtra	Tuesdays.
Naini Tal	Naini Tal Gazette	Wednesdays.
Navsari	Independent	Saturdays.
Nova Goa	Boletim do Comercio ..	Wednesdays.
	O'Commercio	Daily.
	Odebate	Mondays.
	Heraldo	Daily, except Mondays.
	O'Heraldo	Daily, except Sundays and holidays.
Ootacamund	South of India Observer and Nilgiri News.	Daily issue except Sundays.
Pandharpur	Pandhari Mitra	Sundays.
Panjim Goa	O'Crente	Saturdays.
Parur	Uttara Tharaka	Saturdays.
Pen	Sudhakar	Fridays.
Peshawar	Afghan	Daily.
	Reuter's Telegram Company, Limited.	.....
	Peshawar Daily News	Daily.
Poona	Deccan Herald	Daily.
	Dynana Prakash	Daily, except Mondays.
	Kesari	Tuesdays.
	Maharatta	Sundays.
	Pandit	Daily, and weekly on Wednesdays.
	Poona Mail	Daily.
	Evening Despatch	Daily.
	Sudharak or Reformer	Sundays.

Stations.	Title in full.	Day of going to Press.
Quetta	Baluchistan Gazette	Wednesdays and Saturdays.
	Quetta News War Bulletin	Daily.
Quilon	Malayali	Wednesdays and Saturdays.
Rajkot	Desabhimani	Wednesdays.
	Kathiawar Times	Wednesdays and Sundays.
Rangoon	Burma Sunday Times	Sundays.
	Griffith's Telegraph Co., Ltd.	.....
	Rangoon Gazette	Daily, except Mondays.
	Rangoon Times	Daily, except Sundays.
Ratnagiri	Bakool	Saturdays.
	Satya Shodhak	Sundays.
Rawalpindi	Punjab Times	Saturdays and Wednesdays.
Satara	Shubha Suchaka	Fridays.
Satara City	Prakash	Wednesdays.
Secunderabad	Hyderabad Bulletin	Daily.
	Notice Sheet	Daily.
Shahjahanpur	Sarpunch	Daily.
Shikarpur (Sind)	Trade Advertiser (Waper-Samachar)	Saturday.
Shillong	Assam Advertiser	Fridays.
Sholapur	Kalpataru	Sundays.
	Sholapur Samachar	Tuesdays.
Silchar	Englishman Bulletin	Daily.
	Surma	Sundays.
	Associated Press	.....
	Indian News Agency	.....
Simla	Indian War Cry	27th of each month.
	News of India	Wednesdays.
	Pioneer Daily Bulletin	Week days.
	Reuter's Telegram Company, Limited.	.....
Sukkur	Sindhi	Saturdays.
	Sind Advocate	Thursdays.
Surat	Apakshapata	Saturdays.
	Deshi Mitra	Thursdays.
	Gujrat Mittra and Gujarat Darpan	Saturdays.
	Jain Mitra	Wednesdays.
	Peoples' Business Gifts	Monthly.
	Praja Pokar	Wednesdays.
	Surat Akhbar	Sundays.
Sylhet	Paridarsaka	Wednesdays.
Tamluk	Tamalika	Saturdays.
Tangail	Islam Rabi	Fridays.
Thana	Arunodoya	Sundays.
Tinnevelly	Kalpaka	Monthly.
Trichur	Lokaprakasam	Mondays.
Tiruvalla	Kerala Taraka	Wednesdays.
Trivandrum	Western Star	Tuesdays, Thursdays, and Saturdays.
Vizagapatam	Bharata Kesari	Bi-Weekly.
	Andhra Advocate	Fridays.
Wai	Modavritta	Mondays.
	Vrittasar	Mondays.
Yeotmal	Harikishore	Sundays.

INDIAN PRESS LAW.

The Newspapers (Incitements to Offences) Act, 1908, was passed in view of the close connexion between the perpetration of outrages by means of explosives and the publication of criminal incitements in certain newspapers. The Act deals only with incitements to murder, to offences under the Explosive Substances Act, 1908, and to acts of violence. It gives power in such cases to confiscate the printing press used in the production of the newspaper, and to stop the lawful issue of the newspaper. The procedure adopted in the Act follows the general lines of that provided in the Code of Criminal Procedure for dealing with public nuisances, with the addition that the final order of the magistrate directing the forfeiture of the press is appealable to the High Court within 15 days. It is further provided that no action can be taken against a press save on the application of a Local Government. When an order of forfeiture has been made by the magistrate, but only in that case, the Local Government is empowered to annul the declaration made by the printer and publisher of the newspaper under the Press and Registration of Books Act, 1867, and thereafter neither that newspaper nor any other which is the same in substance can be published without a breach of the law.

The Indian Press Act, 1910, was a measure of wider scope, the main object of which was to ensure that the Indian press generally should be kept within the limits of legitimate discussion.

The Act deals, not only with incitements to murder and acts of violence, but also with other specified classes of published matter, including any words or signs tending to seduce soldiers or sailors from their allegiance or duty, to bring into hatred or contempt the British Government, any Native Prince, or any section of His Majesty's subjects in India, or to intimidate public servants or private individuals.

The different sections of the Act have in view (i) Control over presses and means of publication; (ii) control over publishers of newspapers; (iii) control over the importation into British India and the transmission by the post of objectionable matter; (iv) the suppression of seditious or objectionable newspapers, books, or other documents wherever found.

As regards the first of these objects, it is laid down that proprietors of printing presses making a declaration for the first time under section 4 of the Press and Registration of Books Act, 1867, shall give security, which may, however, be dispensed with by the magistrate at his discretion; that the proprietors of presses established before the passing of the Act may similarly be required to give security if and when they are guilty of printing objectionable matter of the description to which the Act applies; and that, where security has been deposited, Local Governments may declare such security forfeit where it appears to them that the press has been used for printing or publishing such objectionable matter. When the initial security so deposited has thus been forfeited, the deposit of further security in a larger sum is required before a fresh declaration can be made under section 4 of the Press and Registration of Books Act, and, if thereafter, the press is again used for printing or publishing objectionable matter the further security deposited and the press itself may be declared forfeit.

Control over publishers of newspapers, the second main object of the Act, is provided for in a similar manner. The keeping of a printing press and the publishing of a newspaper without depositing security when required are punishable with the penalties prescribed for failure to make the declarations required by sections 4 and 5 of the Press and Registration of Books Act, 1867.

Other provisions deal with the bases of books or pamphlets printed out of India or secretly in India. The more efficient control over the importation and transmission by post of objectionable matter of the kind described in the Act is given by empowering the customs and post office authorities to detain and examine packages suspected of containing such matter, and to submit them for the orders of the Local Government.

The fourth object of the Act is attained by authorising the Local Government to declare forfeit any newspaper, book or other document which appears to it to contain matter of the prohibited description, and upon such a declaration the Act empowers the police to seize such articles and to search for the same.

In any case in which an order of forfeiture is passed by the Local Government, an application may be made to the High Court on the question of fact whether the matter objected to is, or is not, of the nature described in the Act. For the most part the object of the Act has been secured, as regards the local press, without recourse to the power of confiscating security.

Press Association of India.—At the end of 1915 this Association was formed in Bombay. According to the articles of constitution "Its objects shall be to protect the press of the country by all lawful means from arbitrary laws and their administration, from all attempts of the Legislature to encroach on its liberty or of the executive authorities to interfere with the free exercise of their calling by journalists and press proprietors, and for all other purposes of mutual help and protection which may be deemed advisable from time to time." Members pay a minimum subscription of Rs. 10 annually. The affairs of the Association are managed by a Council. *Honorary Secretary*: Mr. B. G. Horniman, The *Bombay Chronicle*.

Societies : Literary, Scientific and Social.

AGRICULTURAL AND HORTICULTURAL SOCIETY OF INDIA (Calcutta).—Founded 1820. Annual subscription Rs. 32. Entrance fee Rs. 8. *Secretary*, F. H. Abbott, 17, Alipore Road, Alipore.

AGRI-HORTICULTURAL SOCIETY OF BURMA.—*Secretary*, Capt. W. H. Allen, Victoria Park, Kandawglay.

AGRI-HORTICULTURAL SOCIETY OF MADRAS.—Established 1833. Quarterly subscription for members in Class A Rs. 7, in Class B Rs. 3. *Secretary*, P. F. Fyson, Mount Road, Teynampett, S. W., Madras.

ANTHROPOLOGICAL SOCIETY OF BOMBAY.—Founded 1886, to promote the prosecution of Anthropological research in India; to correspond with Anthropological Societies throughout the world; to hold monthly meetings for reading and discussing papers; and to publish a periodical journal containing the transactions of the Society. Annual subscription Rs. 10. *Secretary*, R. P. Masani, M.A., Town Hall, Bombay.

ASIATIC SOCIETY OF BENGAL (Calcutta).—*Secretary*, G. H. Tipper, M.A., 57, Park Street, Calcutta.

BHANDARKAR ORIENTAL RESEARCH INSTITUTE, POONA.—The Institute was inaugurated on the 6th of July 1917, the 80th birthday of Sir R. G. Bhandarkar, at the hands of H. E. Lord Willingdon who has consented to become its first President. Its objects are to provide an up-to-date Oriental Library, to train students in the methods of research and to act as an information bureau on all points connected with Oriental Studies. Membership dues Rs. 10 a year or Rs. 100 compounded for life. *Secretary*, Dr. S. K. Belvalkar, 339, Narayan Peth, Poona.

BOMBAY ART SOCIETY.—Founded 1888, to promote and encourage Art by exhibitions of Pictures and Applied Arts, and to assist in the establishment and maintenance of a permanent gallery for Pictures and other works of Art. Annual exhibition every February. Annual subscription Rs. 10; Life Member Rs. 100. *Secretary*, S. V. Bhandarkar, Bombay.

BOMBAY BRANCH OF THE CLASSICAL ASSOCIATION.—The Classical Association was started, in 1903 in London, to promote the development and maintain the well-being of classical studies. The Bombay Branch was founded in 1910; it numbers over 100 members; holds 5 or 6 meetings a year; and publishes a yearly journal. Subscription Rs. 6 for ordinary and Rs. 2-8-0 for associate members. *Secretary*, Mrs. Gray, 13 Marine Lines, Bombay.

BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY.—Founded 1804, to investigate and encourage Oriental Arts, Sciences and Literature. Annual subscription Rs. 50. *Secretary*, The Rev. R. M. Gray, Town Hall, Bombay.

BOMBAY NATURAL HISTORY SOCIETY.—Founded 1883, to promote the study of Natural History in all its branches. The Society has a membership of about 1,700 and a small museum with a representative collection of the different vertebrates and invertebrates found in the Indian Empire and Ceylon. A Journal is published quarterly which contains articles on different natural history subjects as well as descriptions of new species and local lists of different orders. In the more recent numbers, serial articles on game birds, common snakes, and common butterflies have been appearing. Annual subscription Rs. 15. Entrance fee, Rs. 10, *Honorary Secretary*, W. S. Millard, *Curator*, N. B. Kinnear, Office and Museum, 6, Apollo Street, Bombay.

BRITISH AND FOREIGN BIBLE SOCIETY.—Since 1811 the British and Foreign Bible Society has been at work in this country. It has 6 Auxiliaries in India and an Agency in Burma. The first Auxiliary was established in Calcutta, in 1811, then followed the Bombay Auxiliary in 1813, the Madras Auxiliary in 1820, the North India Auxiliary in 1845, the Punjab Auxiliary in 1863, the Bangalore Auxiliary in 1875, while the Burma Agency was founded in 1899. The Bible or some portion of it is now to be had in nearly 100 different Indian languages and dialects and the circulation throughout India and Burma reached over 1,000,000 copies in 1916. The Bibles, Testaments, and Portions in the various Vernaculars are sold at rates which the very poorest can pay, and at considerable loss to the Society. Grants of English Scriptures are made to Students who pass the various University examinations, whose applications are countersigned by their Principals, as under :—

The 4 Gospels and the Book of Acts in 1 Vol. to Matriculates.

The New Testament and Psalms to Intermediates.

The Bible to Graduates.

Last year no fewer than 13,750 volumes were so distributed. Portions of Scriptures in the important vernaculars have been prepared in raised type for the use of the Blind and large grants of money are annually given to the different Missions, to enable them to carry on Bible women's work and Colportage.

Besides the British and Foreign Bible Society, there is Bible work carried on in India, Assam and Burma in a much smaller way by the Bible Translation Society—which is connected with the Baptist Missionary Society—the American and Canadian Baptist Mission, the National Bible Society of Scotland, and the Tranquebar Tamil Bible Society.

The following table shows the growth in the British & Foreign Bible Society's work during the past few years in India & Burma :—

CIRCULATION OF THE B.F.B.S. IN INDIA.

Auxiliaries.	1916.	1915.	1914.	1913.
Calcutta	139,499	148,058	169,285	184,753
Bombay	189,594	184,937	181,452	178,720
Madras	275,264	233,420	263,805	280,552
Bangalore	34,265	36,336	35,658	36,233
North India	189,564	172,172	210,754	186,650
Punjab	157,680	115,391	122,224	92,484
Burma	105,127	117,948	117,518	117,225
Total copies of Scriptures	1,090,993	1,008,262	1,100,696	1,076,617

These returns do not include the copies which any Auxiliary has supplied to London or to other Auxiliaries and agencies during the year.

BRITISH MEDICAL ASSOCIATION (Bombay Branch).—Founded 1886, to promote Medical and the Allied Sciences and the maintenance of the honour and interests of the Medical Profession. *Secretary*, Dr. D. R. Bardi, Bombay.

BOMBAY MEDICAL UNION.—Founded 1883 to promote friendly intercourse and exchange of views and experiences between its members and to maintain the interest and status of the medical profession in Bombay. The entrance fee for Resident members Rs. 5, monthly subscription Rs. 2. Absent members Re. 1, and non-resident members yearly subscription Rs. 5. *President*: Dr. K. M. Dubash. *Secretaries:* Dr. R. D. Mody, Dr. A. K. Contractor. *Hon. Librarians* (Sir D. M. Petit, Medical Union Library):—Dr. M. D. D. Gilder, Dr. Y. D. Gilder. *Treasurer:* Dr. M. P. Kerrawalla, 123, Esplanade Road, Bombay.

BOMBAY SANITARY ASSOCIATION.—Founded to create an educated public opinion with regard to sanitary matters in general; (*b*) to diffuse the knowledge of sanitation and hygiene generally, and of the prevention of the spread of disease amongst all classes of people by means of lectures, leaflets and practical demonstrations and, if possible, by holding classes and examinations; (*c*), to promote sanitary science by giving prizes, rewards or medals to those who may by diligent application add to our knowledge in sanitary science by original research or otherwise; (*d*) to arrange for homely talk or simple practical lectures for mothers and girls in the various localities and different chawls, provided the people in such localities or chawls give facilities. The Sanitary Institute Building in Princess Street, which has lately been built by the Association, at a cost of nearly Rs. 1,00,000 the foundation stone of which was laid by Lady Willingdon in March, 1914, and opened in March, 1915, is a large and handsome structure with a large Lecture Hall, Library, Museum, etc., and also provides accommodation for King George V Anti-Tuberculosis League Dispensary and Museum and the Malaria Office and the Lady Willingdon Scheme. *Hon. Secretary*: Dr. J. A. Turner, C.I.E., Executive Health Officer, Bombay.

EUROPEAN ASSOCIATION.—The European Association was established in 1883 under the title of the European and Anglo-Indian Defence Association and was re-established in 1912 under the title of the European Defence Association, but the present title was adopted in 1913. The Association has for its objects the general protection of European interests and the promotion of European welfare. The Association numbers 4,500. The Head Offices are at Grosvenor House, Calcutta. *President*, The Hon'ble Sir Archy Birkmyre. *Secretary*, Mr. Alec Marsh.

BRANCHES OF THE EUROPEAN ASSOCIATION.

ASSAM VALLEY, DIBRUGARH.—*Chairman*, Mr. E. L. Greenough. *Hon. Secretary*, Mr. A. L. Allum.

BIHAR, MOZUFFERPORE.—*Chairman*, Mr. P. Kennedy. *Hon. Secretary*, Mr. J. M. Wilson.

BOMBAY.—*Chairman*, The Hon'ble Mr. J. S. Wardlaw Milne. *Hon. Secretary*, Mr. A. W. S. Wise.

BURMA, RANGOON.—*Chairman*, Sir A. W. Binning. *Hon. Secretary*, Mr. R. Edmondson.

DARJEELING.—*Chairman*, The Hon'ble Mr. H. R. Irwin. *Hon. Secretary*, Mr. G. Wrangham-Hardy.

DELHI.—*Hon. Secretary*, Mr. R. E. Grant Govan.

DOOARS, JALPAIGURI.—*Chairman*, Mr. D. Gollan. *Hon. Secretary*, Mr. Duncan McTaggart.

MADRAS.—*Chairman*, Mr. J. H. Thonger. *Joint Hon. Secretaries*, Mr. H. H. Chettle and Mr. H. M. Spencer.

PUNJAB, LAHORE.—*Advisory Committee*, Mr. J. D. Bevan, Mr. E. H. Hardy and Dr. C. A. Owen, M.D., F.R.C.S.

SIND, KARACHI.—*Chairman*, Mr. G. Gordon. *Hon. Secretary*, Mr. R. D. Marshal.

SURMA VALLEY, SILCHAR.—*Chairman*, Colonel J. G. Knowles, C.I.E. V.D., A.D.C., *Hon. Secretary*, Mr. F. G. Ballantyne.

UNITED PROVINCES, CAWNPORE.—*Chairman*, Mr. T. Smith. *Hon. Secretary*, Mr. J. G. Ryan.

INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE (Calcutta).—*Secretary*, Dr. Amrita Lal Sircar, 210, Bow Bazar Street, Calcutta.

INDIAN LIBERAL CLUB—Started on 30th March 1917, to promote a systematic study of politics in general and Indian politics in particular, to organise free and well informed discussions on current political topics as well as on abstract questions to provide facility for collecting information in questions arising, or necessary to be raised, in the Imperial and Provincial Legislative Councils and to form and maintain a library.

Office, Servants of India Society, Sandhurst Road. *President*, Sir Narayan Chandavarkar. *Secretaries*, Mr. J. R. Chapure, B.A., LL.B., and Mr. C. S. Deole, B.A.

INDIAN ECONOMIC SOCIETY (BOMBAY)—Started in 1915, with the object of affording facilities for an accurate and scientific study of economics, for the formation and dissemination of current economic ideas and for collecting first hand information regarding the industry and commerce of the country with a view to the removal of difficulties in the way of their promotion and development. The Society arranges periodical discussions and publishes pamphlets and it holds weekly Marathi Class in Economics. Subscription; a minimum of 6 Rs. a year. *President*, Mr. J. B. Petit. *Secretaries*, Mr. C. S. Deole of the Servants of India Society, Mr. N. M. Muzumdar and Mr. Gulabchand Devchand. *Office*—Servants of India Society's Home, Sandhurst Road, Girgaon.

INDIAN MATHEMATICAL SOCIETY—Founded in 1907 for the advancement of Mathematical studies in India. It conducts a bi-monthly journal in which papers on mathematical subjects are published and maintains a library with current mathematical periodicals in all languages and new books in the subject. The library is located in the Fergusson College Poona, whence the journals and books are circulated to members by post. The journal of the Society is published in Madras. There are about 150 members from all parts of India. *President*, Principal A. C. L. Wilkinson, M.A., Elphinstone College, Bombay. *Secretaries*, Prof. D. D. Kapadia, Poona, and Prof. M. T. Naraniengar, Bangalore. *Librarian*, Principal R. P. Paranjpye, Poona.

INDIAN SOCIETY OF ORIENTAL ART (Calcutta.)—*Joint Secs. and Treasrs.*, N. Blount and B. C. Law, P. O. Box No. 8, Calcutta.

INDIA SUNDAY SCHOOL UNION.—The India Sunday School Union is a large indigenous interdenominational Society having the sympathy and co-operation of the greater number of Missionary Societies in India. The great purposes of the Union are the promotion of systematic and careful Bible study, and the increased efficiency of Sunday Schools in India. Its operations extend beyond the borders of India itself to Arabia, Siam, Borneo and Assam. Upwards of 650,000 Sunday School scholars and teachers and 13,944 Sunday Schools are connected with the Union, speaking 60 Vernaculars. One Central and 40 Provincial Committees control its Indian work, which forms part of a world-wide movement with a membership of 28,000,000.

The India Union was founded in Allahabad in 1876. Yearly examinations are held for both teachers and scholars in 31 centres, for which medals, prizes, scripture awards, and certificates are granted to successful candidates, upwards of 20,000 entered these Exams. for 1913. Notes on the daily portions of the Interdenominational Bible Reading Association are published by the I. S. S. U. in English and 14 Vernaculars, and 50 editions of the S. S. Lesson Expositions are published in 20 Vernaculars. In addition, there is a large publication of literature dealing with all phases of child study and moral and religious training. The monthly publication of the Union is the *India Sunday School Journal*. The Teachers Training Department is under the care of Mr. E. A. Annett.

General Secretary of the Union, the Rev. R. Burges, India Sunday School Union Office, Jubbulpore.

MADRAS FINE ARTS SOCIETY.—*Secretary*, Edgar Thurston, Central Museum, Madras.

MADRAS LITERARY SOCIETY AND AUXILIARY OF THE ROYAL ASIATIC SOCIETY.—*Secretary*, W. F. Grahame, I.C.S., College Road, Nungambaukum.

NATIONAL INDIAN ASSOCIATION.—Founded in 1870. Its objects are:—(*a*) To extend in England, knowledge of India, and interest in the people of that country. (*b*) To co-operate with all efforts made for advancing Education and Social Reform in India. (*c*) To promote friendly intercourse between English people and the people of India. In all the proceedings of the Association the principle of non-interference in religion and avoidance of political controversy is strictly maintained. It has branches in Bombay, Madras, Bengal and

the Punjab. *Hon. Secretary,* Miss Beck, 21 Cromwell Road, London. Publication. *The Indian Magazine and Review,* a monthly Journal which chronicles the doings of the Association in England and in India, and takes note of movements for educational and social progress. It publishes articles about the East to interest Western readers, and articles about the West to interest readers in the East.

PHILATELIC SOCIETY OF INDIA.—Annual subscription Rs. 20. *Secretary,* J. Godinho, Girgaum, Bombay.

PHOTOGRAPHIC SOCIETY OF INDIA (Calcutta). —Annual subscription Rs. 24 (Town Members) and Rs. 10 (Mofussil members). Entrance fee Rs. 20 and Rs. 10. *Secretary.* A. K. Taylor, 40, Chowringhee Road, Calcutta.

RANGOON LITERARY SOCIETY.—*Secretary,* M. Hunter, 13, York Road.

RANGOON MUSICAL AND DRAMATIC SOCIETY. —Founded 1909. *Secretary,* Miss R. West, Dalhousie Street, Rangoon.

ROYAL SOCIETY OF ARTS, INDIAN SECTION.— This Society was founded in London in the 18th Century. Its recently published history by Sir Henry Trueman Wood, Secretary of the Society, gives the following account of the Indian Section. In 1857, a proposition was made by Mr. Hyde Clarke who wrote to the Council suggesting that "a special section be formed for India, another for Australia, one for English America and so on." It was suggested that the Indian Section should meet once a fortnight for the reading of papers. Nothing came of the suggestion until ten years later when Mr. Hyde Clarke returned to England, and in 1868 he renewed his proposal, but only proposing the formation of a committee which should organise conferences on Indian subjects. This time the suggestion was taken up more warmly. Mr. Hyde Clarke himself was placed on the Council, and the Indian Conferences which soon developed into the Indian Section, were started. "The Indian Section thus established became a most important department of the Society. It has had great results in India by spreading information as to the directions which the development of Indian manufactures and Indian products could most usefully take, and in England by giving similar information as to the industrial resources and progress of India itself. The Section has received great help from the Indian press and it has in return been of service to the Indian press in supplying useful information to it. It has been of great value to the Society itself as the means by which many members have been added to its list, so that in fact, thanks to a very large extent to the work of the Indian Section and of the allied section for the Colonies, a large proportion of the present number of members come from the dependencies of the Empire abroad." *Secretary,* Sir H. T. Wood, 18 John Street, Adelphi, London.

SERVANTS OF INDIA SOCIETY.—The Servants of India Society which was founded by the late Hon'ble Mr. Gopal Krishna Gokhale, C.I.E., in 1905, has its Head-quarters in Poona and its objects are "to train national missionaries for the service of India and to promote by all constitutional means the true interests of the Indian people." Its government is vested in the first member or President and a Council. On the death of Mr. Gokhale in February, 1915, the Hon'ble Mr. V. S. Srinivasa Sastri was elected President. It has at present four branches, *viz.,* (1) in Bombay, (2) in Madras, (3) in the United Provinces, (4) in Central Provinces. Each Branch consists of ordinary members, members under training and permanent assistants who work under the direction of a Senior Member. The branches engage both in propagandist and active work of political, educational, social, agricultural and philanthropic character. A fair idea of the work of a branch can be had from a brief description of the operations of the Bombay Branch whose members have so far undertaken activities in various fields. (1) Social purity like the Holika Sammelan of Bombay, (2) Social reform organization under the auspices of the National Social Conference, (3) rousing public opinion about elementary education, (4) promotion of the cause of elevation and education of Indian women by building up institutions like the Seva Sadan, Poona, (5) Social Service as carried out by the Social Service League of Bombay, (6) spread of co-operative movement among the agriculturists, compositors in the city of Poona and mill-hands in Bombay. The Co-operative societies, as at Hadapsar in and other villages around Poona, started for the benefit of these poor people number about 25 with a total membership of over 1,200, capital of nearly one and half lakhs and a total turnover of three lakhs per year. 18 of these societies which are in Bombay for poor labouring classes are so conducted as to free their members entirely from their chronic indebtedness. Moreover educational work is organized by starting a Co-operative Secretaries' Training Class in Bombay for 60 secretaries from the various districts this year, (7) relief work connected with wide-spread calamities by organizing the Plague Relief Committee of Poona, which succeeded in making inoculation popular in the Deccan, the Salumbra Fire Relief Committee which arranged for the relief to sufferers for five years and by undertaking a scheme of non-official relief during the famines of 1907-08 and 1914 in the United Provinces, the famine in Gujarat and Kathiawar of 1911-12 and the famine of 1913 in the district of Ahmednagar, (8) organising public opinion on the question of Indians in South Africa, (9) its political work is conducted strictly on congress lines and thus it was able to start District Congress Committees in several wards of the city. These are now conducting a political quarterly, (10) it has started in Bombay an organisation called the Indian Economic Society with a view to promoting the study of Indian economics on right lines and also conducts a vernacular class. The Bombay Branch has systematically undertaken the training of Secretaries of Co-operative Societies in the Presidency. Government help in this scheme.

Quite recently the United Provinces Branch organised a band of volunteers who rendered assistance, in a manner that drew general approbation, to the pilgrims at the last Kumbha Mela in Hardwar. The Society engages in journalistic work also, having in its control the *Hitavada*, an English weekly in Nagpur, the *Dnyan Prakash*, a Marathi daily in Poona, and the *Hindustani*, an Urdu weekly in Lucknow. The U. P. Branch has in addition undertaken the publication of pamphlets on public questions and has sent out three such publications.

The expenses incurred by the Central Home of the Society in Poona and its four branches exceed Rs. 40,000 a year and this amount is made up by contributions from Indians, rich as well as poor. The present number of workers enlisted by the Society is about 20, most of whom are University men of considerable standing.

President.—The Hon'ble Mr. V. S. Srinivas Shastri, B.A.L.T., Triplicane, Madras, Senior Member, Madras Branch. Mr. Gopal Krishna Devadhar, M.A., Senior Member, Bombay Branch. Mr. Natesh Appaji Dravid, M.A., Senior Member, Central Provinces Branch. Mr. Hirdayanath Kunzru, B.A., B.SC., Senior Member, Upper India Branch. Mr. Anant Vinayak Patwardhan, B.A., Senior Member, Business Branch, Poona. Messrs. Devadhar, Kunzru and Vaze constitute the Council of the Society with the Hon'ble Mr. Shastri as its President. Dr. H. S. Deva, L.M. & S., is the Secretary of the Council and also of the Society and remains at the head-quarters of the Society at Poona.

SEVA SADAN.—The Seva Sadan Society was started on the 11th of July, 1908, by the late Mr. B. M. Malabari. It is the pioneer Indian ladies' society for training Indian sisters ministrant and serving (through them) the poor, the sick and the distressed. The society has a habitation in Gamdevi, Bombay. One-half of the Building and Endowment Fund of Rs. 82,000 has been spent mainly in building at Gamdevi, and partly in the purchase of two acres of land at Santa Cruz for a "Sisters' Home" and other purposes.

The Society maintains the following institutions for training its probationers and for doing its other work. 1. A home for the Homeless. 2. An Industrial Home with various departments. 3. A Dispensary for Women and Children. 4. Ashrama (or Sisterhoods). 5. Free educational classes and a Library and Reading-room. 6. Home-Classes in the quarters of the poor, and normal classes for training Marathi women for the teacher's profession. All these are for the benefit of poor women. *Secretary*, Miss B. A. Engineer, M.A., LL.B., *President*, Mrs. Ramabai Ranade, *Hon. Gen. Secretary*, the Hon. Mr. Lalubhai Samaldas, C.I.E., *Treasurers*, Sister Sushilabai and the Hon'ble Mr. Lalubhai Samaldas; *Trustees*, Sir Narayan Chandavarkar, Sir Bhalchandra Krishna, Sir V. D. Thackersey, the Hon. Mr. G. K. Parekh and the Hon. Mr. Lalubhai Samaldas, C.I.E.

CONSUMPTIVES' HOME SOCIETY.—This Society was started by the late Mr. B. M. Malabari on the 1st of June 1909. It was registered under Act XXI of 1860. It is an off-shoot of the Seva Sadan. Mr. Malabari secured a large grant of land in a Himalay an pine forest in Dharmpur (Simla Hills) from H. H. the Maharaja of Patiala, for a Sanitorium for Consumptives. The Sanitorium was started on June 1, 1909, and has been in existence ever since. Mr. Malabari collected an Endowment Fund of about Rs. 67,000 lodged with the Treasurer, Charitable Endowments, under Act VI of 1890. Nearly Rs. 70,000 more have been spent on buildings, etc., and the current annual expenditure is about Rs. 14,000. Dr. Nanavati, L.M. & S., and B.Sc., is in charge of the Sanitorium.

SOCIETY FOR THE PROTECTION OF CHILDREN IN WESTERN INDIA.—*Office and Refuge:* Girgaon Back Road, Bombay.

Founded.—To prevent the public and private wrongs of children and the corruption of their morals; to take action for the enforcement of the laws for their protection, and, if necessary to suggest new laws or amendments of the existing laws; to provide and maintain an organisation for these objects; and to do all other lawful things incidental or conducive to the attainment of the foregoing objects. Subscription for annual membership, Rs. 10 for Life Membership, Rs. 100.

Honorary Secretaries: Mr. Mahomedbhoy Currimbhoy, Mr. N. V. Mandlik, B.A., LL.B., Mr. R. P. Masani, M.A., Mr. E. V. Rieu.

WEST OF INDIA ANGLING ASSOCIATION.—The Association was started in 1912 at Poona, the headquarters were transferred to Bombay in 1915, and the membership has increased considerably since then. The rights for stocking, preserving and angling in Lake Sydenham at Walwhan, near Lonavla, have been obtained by the Association from the Tata Hydro-Electric Power and Supply Co. and a commencement has been made with stocking the lake with sporting fish but it will not be opened for angling for a few years. A journal is published quarterly which contains articles on fishing, experiences in the rivers and lakes and on the coasts of India, the sporting fishes of the country and notes of general interest to Indian anglers.

Entrance fee Rs. 15, Annual subscription Rs. 10. *Patron*, H. E. Lord Willingdon. *President*, E. Comber. *Hon. Secretary and Treasurer*, L. Baines, C/o Russo-Asiatic Bank Bombay.

YOUNG WOMEN'S CHRISTIAN ASSOCIATION IN INDIA, BURMA AND CEYLON.—This was started in India in an organized and National way in 1896. The aim of the Association is to meet the needs of the girls and women who live in India from an Intellectual, Spiritual, Social and Physical standpoint. This is done in many ways in the 153 Associations that now flourish under the auspices of the National Young Women's Christian Association. The Associations in the big cities have a large membership and include all classes of the community. Clubs, Classes, Lectures, Commercial Courses, Music, Languages, Bible-

and Mission Study, Social Intercourse, Physical Training, and all kinds of physical recreation are carried on as need arises in these City Associations. Boarding Homes are established in all the principal cities where teachers, nurses, business girls, students, apprentices, etc., can have a comfortable home with good wholesome food and congenial companionship from Rs. 20 per month. Travellers' Aid work is done and many travellers, especially in the port cities, find accommodation as they pass through employment is also found for women and girls. A useful feature of the association is the Holiday Homes that are conducted in the hills, where girls from the plains can find inexpensive accommodation and regain health and strength. Some of the homes accommodate as many as forty-five at one time and hundreds benefit during the season. The work of the Association in the large cities is managed by a staff of Y. W. C. A. Secretaries, who are fully trained and equipped to meet the many demands that are made on them. These Secretaries are supplied from America, Britain, Australia, Canada and India.

Many of the Associations are in small upcountry stations where a handful of members constitute the Branch, led by some lady in the station who is glad of this opportunity for service. The members of these small stations may be transferred, in the ever-changing life of India, into the larger cities and then they learn in a fuller way what the Association can do to help them in all-round development. In addition to the work of the city department described above, the student department (which is affiliated to the world's christian student federation) has 47 branches in schools and colleges, while the vernacular department is carrying on valuable work in co-operation with Missionary societies in five different languages. The National Headquarters are in Bombay. The inter-denominational character of the Association is clearly kept in the forefront and ladies of many Christian denominations are on the Committee. The National Committee consists of thirty-two members, resident and non-resident, representative of the City, Student and Vernacular Departments in various sections of the country.

The Officers are: *President*, Mrs. Normand; *Vice Presidents*, Mrs. Gray, Mrs. McKenzie, Mrs. Edwards; *Hon. Treasurer*. F. J. Clark; *National General Secretary*, Miss Rena Carswell; *National Business Secretary*, Miss Alice Shields. *The General Secretaries of the principal places are*; Bombay, Miss Cowdrey; Calcutta, Miss Crowe; Colombo, Miss Alexander; Rangoon, Miss Ledwich; Madras, Miss Downey; Bangalore, Miss Meager; Karachi, Miss O'Brian; Lahore, Miss Denison; Mussoorie, Miss Gregory; Simla, Miss Rutherford; Lucknow Miss Davies; Naini Tal, Miss Mansem; Jubbulpore and Nagpur, Miss Ellis. The Patroness of the Association is H. E. Lady Chelmsford, who is also President of the Simla Branch.

The National Office is in the British Foreign and Bible Society Building, 170, Hornby Road, Bombay.

The Official Organ of the Association is "Woman's Outlook in India," which has circulation of over 1,500 copies monthly.

This supplies women living in India with a good review at the price of Rs. 1-8-0 a year.

YOUNG MEN'S CHRISTIAN ASSOCIATION.—This Association, which was founded by the late Sir George Williams on June 6, 1844, seeks to unite those young men who, regarding Jesus Christ as their God and Saviour according to the Holy Scriptures, desire to be His disciples, in their doctrine and in their life, and to associate their efforts for the extension of His kingdom among young men. The above is known as the "Paris Basis" and it is world-wide. It was adopted at the first World's Convention in Paris in 1855 and re-affirmed at the Jubilee World's Convention in Paris in 1905. The aim of the Association is through its religious, educational, and physical work to cater for the threefold—spiritual, mental and physical—needs of young men, and its policy is one of intense loyalty to the Church.

There are, as a rule, two classes of members. Any young man who is a member in full communion of any Protestant Christian Church may be an active or voting member and any young man of good character may be an associate.

The Young Men's Christian Association though relatively new to India, is spreading very rapidly. The local Associations are autonomous and governed by local Boards of Directors. These Associations in convention elect a National Council of European and Indian laymen, who are responsible for the supervision and expansion of all forms of the Association work. Both the National Council and the local Associations employ specially trained full time Secretaries. Over two-thirds of the Secretaries are supported from funds raised in India and Ceylon. The remaining Secretaries are supported by the Associations of North America, Australasia, and Great Britain, but their work is directed by committees in India, to whom their services are loaned for the time-being. The first paid Secretary came to India over twenty-five years ago, in response to an appeal from Madras. Soon afterwards the National Council was organised, and has become increasingly an indigenous institution.

There are now approximately 250 Associations with 15,000 members. Of these about one quarter are Europeans and three-quarters are Indians, of whom over half are non-Christians. The following Associations own one or more buildings which serve as the local headquarters:—Allahabad, 2; Bangalore, 3; Alleppey, 1; Bombay, 4; Calcutta, 5; Calicut, 1; Coimbatore, 1; Colombo, 1; Galle, 1; Hyderabad, 1; Jubbulpore, 1; Karachi, 1; Lahore, 1; Madras, 1; Mandalay, 1; Maymyo, 1; Nagpur, 1; Naini Tal, 1; Rangoon, 3; Secunderabad, 1; Simla, 1.

In addition to buildings owned by the Association, bungalows have been rented to serve as headquarters in the following stations:—Ahmednagar, 1; Allahabad, 1; Ban-

galore, 2; Colombo, 2; Delhi, 1; Ferozpore, 1; Hyderabad, 1; Jamalpur, 1; Jhansi, 1; Jubbulpore, 1; Lahore, 2; Lucknow, 1; Madras, 1; Madura, 1; Mhow, 1; Palamcottah, 1; Multan, 1; Poona, 1; Pudukottah, 1; Rangoon, 1; Trivandrum, 1.

The departments of the National Council are Student, Railway, Rural, Literary, Army High School, Architectural Publication and Physical. The student Christian Association is affiliated to the National Council and has branches in more than two score Colleges. The Railway Department is responsible for the development of Associations amongst railway employés. At Jamalpur the railway institute and apprentices Engineers-Club are operated by the Y. M. C. A. The Rural Department is organising village Y. M. C. A.'s and co-operative credit societies and promoting cottage industries. The Literary Department maintains three Secretaries:—J. N. Farquhar for Hinduism, K. J. Saunders for Buddhism and H. A. Walter for Mohammedanism. The object of the department is to promote a proper and sympathetic understanding of the non-christian religions and show their relationship to Christianity. At the beginning of the war there were but three Army Associations and five Army Secretaries in the whole of India. Now Association privileges are provided for British Troops in twenty-nine cantonments under the direction of seventy Secretaries and Assistants. Sixty Secretaries are at work in Mesopotamia, ten serve the Indian Expeditionary Force in Europe and Egypt and 19 in British East Africa. In addition to organising school boys, Y. M. C. A.'s the High School Department arranges for holiday camps for boys and High School teachers. The National Council employs its own architects who plan and construct its buildings, hostels, and playgrounds. The Physical Department specialises on physical education and is promoting the playground movement. A National Training School is established at Bangalore for the training of Indian Secretaries.

The "Association Press" is the Publication Department. A monthly magazine, the YOUNG MEN OF INDIA, is issued, and many books and pamphlets, both on Association subjects and on those of more general interest. Some of the latter have been issued in conjunction with the Oxford Press.

The Headquarters of the National Council is 5, Russell Street, Calcutta. The officers are:—

Patron:—His Excellency Lord Chelmsford, Viceroy and Governor-General of India.

Chairman:—Raja Sir Harnam Singh, K.C.I.E.

Treasurer;—W. R. Gourlay, Esq., I.C.S. 8, Government Place, Calcutta.

Joint Treasurer.—L. Robertson, Esq., I.C.S.
General Secretaries:—E. C. Carter, K. T. Paul.

The Bombay Association now possesses four well-equipped buildings:—Wodehouse Road, Lamington Road, Rebsch Street, and Reynolds Road. The President is the Hon'ble Mr. I. Carmichael, C.S.I., and the General Secretary is Mr. Wilbert B. Smith. In connection with each building there is a well managed hostel, one forAnglo-Indian apprentices ,one for Indian students, one primarily for European business men, and one for Indian.

The Elton Hockey Tournament and the Condor Tennis Tournament are held annually under the auspices of the Bombay Association.

TABLE OF WAGES, INCOME, &c.

Showing the amount for one or more days at the rates of 1 to 16 Rupees per Month of 31 Days.

Rupees.	1			2			3			4			5			6			7			8			9			10			11			12			13			14			15			16		
Days.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
1	0	0	6	0	1	0	0	1	6	0	2	0	0	2	6	0	3	0	0	3	7	0	4	0	0	4	7	0	5	0	0	5	8	0	6	0	0	6	9	0	7	0	0	7	9	0	8	0
2	0	1	0	0	2	0	0	3	1	0	4	0	0	5	1	0	6	0	0	7	2	0	8	0	0	9	3	0	10	0	0	11	4	0	12	0	0	13	5	0	14	0	0	15	6	1	0	0
3	0	1	6	0	3	0	0	4	7	0	6	0	0	7	8	0	9	0	0	10	10	0	12	0	0	13	11	0	15	0	1	1	0	1	2	0	1	3	1	1	4	0	1	5	0	1	6	0
4	0	2	0	0	4	0	0	6	2	0	8	0	0	10	3	0	12	0	0	14	5	1	0	0	1	2	6	1	4	7	1	6	9	1	8	0	1	10	10	1	12	11	1	15	0	2	1	0
5	0	2	6	0	5	0	0	7	8	0	10	0	0	12	10	0	15	0	1	2	0	1	4	7	1	7	2	1	9	9	1	12	5	1	14	10	2	1	7	2	4	2	2	6	9	2	9	0
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7	0	3	7	0	7	0	0	10	10	0	14	0	1	2	0	1	5	0	1	9	3	1	12	0	2	0	6	2	4	1	2	7	9	2	11	0	3	2	7	3	6	2	3	9	9	4	0	0
8	0	4	1	0	8	0	0	12	4	1	0	0	1	4	7	1	8	0	1	12	10	2	1	0	2	5	1	2	9	3	2	13	5	3	1	0	3	5	8	3	9	10	3	13	1	4	2	0
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20	0	10	3	1	4	0	1	14	11	2	9	0	3	3	7	3	13	11	4	8	3	5	2	0	6	5	12	10	6	7	2	7	1	7	7	11	10	8	6	2	9	0	6	9	10	10	5	0
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PRINCIPAL CLUBS IN INDIA.

Name of Club.	Established	Club-house.	Subscription.			Secretary.
			Ent.	Annual	Monthly.	
			Rs.	Rs.	Rs.	
ABBOTTABAD	..	Abbottabad, N. W. F. Provinces.	16	..	10	Capt. P. M. Rennie.
ADYAR	1890	Madras	75	12	4	F. Buckney.
AGRA	1863	Agra Cantonment ..	50	..	7	Major G.H.C. Wilkins, R.G.A.
AHMEDNAGAR.. ..	1889	.....	32	..	10	Maj. W. Cortlandt Anderson.
AIJAL	1893	Lushai Hills, E. B. and Assam.	32	..	10	Lt.-Col. G. H. Loch.
AJMERE	1883	Kaiser Bagh.. ..	50	..	15	R. E. Coupland.
AKOLA	1870	Berar	100	..	9	H. C. Greenfield.
ALLAHABAD	1868	Allahabad	100	..	9	Capt. G. M. Routh, R.A.
AMRAOTI	..	.....	100	..	7	W. J. M. Peeble.
AMRITSAR	1894	Amritsar	20	..	7	A. Mackay.
BANGALORE UNITED SERVICE.	1868	38, Residency Road ..	100	12	7	Major E. Tennant.
BAREILLY	1883	Municipal Gardens ..	32	..	9	Capt. W. F. M. Loughman.
BARISAL	1864	Backerganj, Barisal ..	25	..	12	G. H. W. Davies.
BARRACKPUR	1850	Grant Trunk Road, 8, River Side.	48	..	10	Major G. D. L. Chatterton.
BASSEIN	1881	Fytche Street, 50, Basseln, Burma.	50	..	10	Comdr. A. Hamilton.
BELGAUM	1884	Close to Race Course..	50	..	10	Lt.-Col. J. W. Harley-Lyon.
BENARES	..	.....	20	..	14	Wilmot C. Dover.
BENGAL	1827	33, Chowringhee Road, Calcutta.	300	15	13	Col. W. Weallens.
BENGAL UNITED SERVICE.	1845	29, Chowringhee Rd...	150	18	10	C. A. Mackenzie.
BOMBAY	1862	Rampart Row ..	100	..	6	H. G. Hichens.
BURMA	1885	Merchant Street, Rangoon.	50	..	6	T. G. Miller.
BYCULLA	1833	Bellasis Rd., Bombay..	200	12	10	B. T. H. Mackenzie.
CALCUTTA	1907	13, Russell Street ..	100	..	..	D. Lindsay & Sir Rajendra Nath Mookerjee.
CALCUTTA TURF ..	1861	49, Theatre Road ..	150	25	..	J. Hutcheson.
CAWNPORE	1844	Cawnpore	50	8	..	Lieut.-Col. Lawrenson.
CHAMBA	1891	Dalhousie, Punjab ..	50	..	14	Capt. H. R. Hoods.
CHITTAGONG	1878	Pioneer Hill, Chittagong.	50	..	10	Comdr. E. Gray Mills, R.I.M.
CLUB OF CENTRAL INDIA.	1885	Mhow	50	..	8	Major Charles T. Lamman.
CLUB OF WESTERN INDIA.	1865	Elphinstone Road, Poona.	200	..	6	Major N. Leslie.
COCHIN	1876	.....	50	..	5	Frederic A. Cox.
COCONADA	1867	Coconada	70	..	10	C. D. T. Shores.
COIMBATORE	1868	Coimbatore	50	..	7	E. M. Moss.
COONOOR	1894	Coonoor, Nilgiris ..	50	12	4	W. Rhodes James.
DACCA	1864	Dacca	50	..	14	H. E. Annett.
DARJEELING	1868	Auckland Road ..	70	..	7	F. M. Timme.
DELHI	1898	Ludlow Castle, Delhi.	32	..	10	Lt.-Col. D. M. Davidson, I.M.S.
HIMALAYA	1841	Mussoorie	100	12	10	R. S. Wahab.
JHANSI	1887	Next to Public Gardens, Jhansi.	50	..	9-8	Major W. Hallaran, R.A.M.C.

Name of Club.	Established.	Club-house.	Subscription.			Secretary.
			Ent.	Annual	Monthly.	
			Rs.	Rs.	Rs.	
MADRAS	1831	Mount Road, Madras.	250	92	10	Captain W. B. F. Davidson.
MADRAS COSMOPOLITAN.	1873	Mount Road	..	12	36	The Hon. Mr. T. Rangachariar.
MALABAR	1864	Beach Road, Calicut..	50	12	6	H. Hadow.
MAYMYO	1901	.....	100	12	10	
MOOLTAN	1892	Mooltan	30	..	12	Capt. C. B. Penton.
NAINI TAL	1864	....	100	..	5	Capt. J. O. Nelson.
OOTACAMUND ..	1840	Ootacamund, Nilgiri Hills.	150	12	5	H. J. Graham.
ORIENT	..	Chaupatty, Bombay..	150	..	6	C. N. Wadia and Col. J. Lloyd Jones.
PEGU	1871	Prome Rd., Rangoon.	150	12	..	Capt. B. Stephenson.
PESHAWAR	1883	Peshawar	32	..	10	Capt. I. M. Conway Poole.
PUNJAB	1879	Upper Mall, Lahore ..	150	..	12	A. R. Ross Redding.
QUETTA	1879	Quetta	60	..	15	Capt. B. Leicester.
RANGOON GYMKHANA.	1874	Halpin Rd., Rangoon.	75	6	7	W. B. Clover.
RANGOON BOAT CLUB..	..	Royal Lakes, Rangoon	48	..	3	R. R. Yeomans.
RAJPUTANA	1880	Mount Abu	50	48	8	Maj. M. P. Corkery
ROYAL BOMBAY YACHT.	1880	Apollo Bunder ..	250	18	8	G. C. Plinston.
SATURDAY	..	7, Wood St., Calcutta.	..	..	..	G. Hervey.
SECUNDERABAD ..	1883	Secunderabad, Deccan	100	..	8	W. C. Clark.
SHILLONG	1878	Northbrook Road, Shillong.	50	..	12	C. H. Holder.
SIALKOT	..	Sialkot, Punjab ..	32	..	6	Capt. G. S. Rivett-Carnac.
SIND	1871	Karachi	200	12	6	W. U. Nicholas.
TRICHINOPOLY ..	1869	Cantonment	50	..	6	Rev. J. A. Schofield.
TUTICORIN	1885	Tuticorin	50	..	8	H. S. Northey.
UNITED SERVICE CLUB	1866	Simla	200	..	..	Capt. L. R. Vaughan.
UNITED SERVICE CLUB, LUCKNOW.	1861	Chutter Manzil Palace	50	..	8	G. L. Dowbiggin.
UPPER BURMA ..	1889	Port Dufferin, Mandalay.	50	..	8	E. D. Haffenden.
WESTERN INDIA TURF.	..	Bombay and Poona ..	50	20	..	Maj. J. E. Hughes absent on Military Duty. Ag. Secretary J. Reynolds.
WILLINGDON SPORTS .	1917	Clerk Road, Bombay..	150	75	..	Sir Stanley Reed.
WHEELER	1863	The Mall, Meerut ..	50	..	9	Captain H. Watts.

The Church.

In the ordinary acceptance of the term, there is no established Church in India. An Ecclesiastical Establishment is maintained for providing religious ministrations, primarily, to British troops, secondarily to the European civil officials of Government and their families. Seven out of the eleven **Anglican Bishops** in India are officers of the Establishment, though their episcopal jurisdiction far transcends the limits of the Ecclesiastical Establishment. The stipends of the three Presidency Bishops are paid entirely by Government, and they hold an official status which is clearly defined. The Bishops of Lahore, Lucknow, Nagpur and Rangoon draw from Government the stipends of Senior Chaplains only but their episcopal rank and territorial titles are officially recognised. The Bishops of Chota Nagpur, Tinnevelly-Madura, Travancore-Cochin, Dornakal and Assam are not on the establishment. The new Bishopric of Assam was created in 1915. In its relations with Government it is subordinate to the see of Calcutta. But the maintenance of the Bishopric is met entirely from voluntary funds.

The **ecclesiastical establishment** includes four denominations—Anglican, Scottish, Roman and Wesleyan. Of these, the first two enjoy a distinctive position, in that the Chaplains of those denominations (and in the case of the first-named the Bishops) are individually appointed by the Secretary of State and rank as gazetted officers of Government. Throughout the Indian Empire there are 134 Anglican and 18 Church of Scotland chaplains whose appointments have been confirmed. The Roman Catholic and Wesleyans receive block-grants from Government for the provision of clergy to minister to troops and others belonging to their respective denominations. The Wesleyan Methodist Church has a staff of military chaplains in India who receive a fixed salary from Government and 25 chaplains working on a capitation basis of payment by Government. Churches of all four denominations may be built, furnished and repaired, wholly or partly at Government expense.

In the Anglican Communion a movement towards **Synodical Government** was making great progress, when, in the course of the year 1914, serious legal difficulties were encountered. The Bishops were advised that their relations with Canterbury and the Crown precluded the establishment of synods on the basis adopted by the Anglican Church in America, Japan, South Africa and other countries where it is not established by the State. It is stated that in course of time those relations may be modified so as to admit of the establishment of synodical government in India. Meanwhile Diocesan Councils are being adopted as a make-shift measure. These Councils possess synodical characteristics, but are devoid of any coercive power.

So far as the European and Anglo-Indian communities are concerned the activities of the Church are not confined to public worship and pastoral functions. The **education** of the children of those communities is very largely in the hands of the Christian denominations. There are a few institutions such as the La Martiniere Schools; on a non-denominational basis; but they are exceptional. In all the large centres there exist schools of various grades as well as orphanages, for the education of Europeans and Anglo-Indians under the control of various Christian bodies. The Roman Catholic Church is honourably distinguished by much activity and financial generosity in this respect. Her schools are to be found throughout the length and breadth of the Indian Empire; and they maintain a high standard of efficiency. The Anglican Church comes next, and the American Methodists have established some excellent schools in the larger hill-stations. The Presbyterians are also well-represented in this field, particularly by the admirable institution for destitute children at Kalimpong, near Darjeeling. Schools of all denominations receive liberal grants-in-aid from Government, and are regularly inspected by the Education Departments of the various provinces. Thanks to the free operation of the denominational principle and its frank recognition by Government, there is no "religious difficulty" in the schools of the European and Anglo-Indian communities.

Christian Missions.

The tradition that St. Thomas, the Apostle, was the first Christian missionary in India is by no means improbable. History, however, carries us no further back than the sixth century, when a community of Christians is known to have existed in Malabar. Since then the so-called **Syrian Church** in south-west India has had a continuous life. Except in its infancy this Church (or rather these Churches, for the Syrian Christians are now divided into four communions) has displayed little of the missionary spirit until quite recent times. Western Christianity was first introduced into India by the Portuguese, who established their hierarchy throughout their sphere of influence, Goa being the metropolitical see of the Indies. St. Francis Xavier, a Spaniard by race, took full advantage of the Portuguese power in Western India to carry on his Christian propaganda. His almost super-human zeal was rewarded with much success, but many of the fruits of his labour were lost with the shrinkage of the Portuguese Empire. It is really to the work of the missionaries of the **Propaganda** in the 17th century that the Papacy owes its large and powerful following in India to-day. The Roman Catholics in India number 1,904,006, of whom 379,251 were added during the decade 1901-1911. The total of "Syrian" Christians (exclusive of those who while using the Syrian liturgy, are of the Roman obedience) is 315,612, as against 248,741 in 1901. Protestant Christians (the term throughout this article includes Anglicans) number 1,636,731, an increase of 486,986 since 1901. Thus, the total number of Christians of all denominations in India is now close on four millions. In fact it probably exceeds that figure at the present moment, as these statistics are taken from the Census Report of 1911, and the rate of increase during the previous decade was nearly 100,000 per annum.

The Protestant Churches made no serious attempt to evangelise India till the beginning of the nineteenth century. They have thus been at work in the Indian mission field for something over 100 years, and the statistical results of their efforts are given above. It is now, however, generally recognised that Christian missions are producing indirect effects in India which lend themselves only incompletely to any sort of tabulation. The main agency of this more diffusive influence of Christianity is the missionary school and college. The **Protestant missions** fill a considerable part in the elementary education of the country. According to the *Year Book of Missions in India*, 1912, they are teaching 446,000 children in 13,204 elementary schools, mostly situated in villages. This represents one-ninth of the total of elementary schools and scholars throughout the Empire. The majority of children in these schools are non-Christians. The same is true also of the high schools and in a still greater degree of the colleges. The former number 283 with 62,600 male and 8,400 female pupils. There are 38 colleges affiliated to Universities, containing 5,488 male and 61 female students. Of these as many as 5,241 are non-Christians. From the standpoint of missionary policy much importance is attached to these agencies for the indirect propagation of the Christian faith. The statesman and the publicist are chiefly interested in the excellent moral effect produced by these institutions amongst the educated classes, and the higher educational ideals maintained by their staffs. The principal **University colleges** under Protestant auspices are the Madras Christian College; the Duff College, Calcutta; the Wilson College, Bombay; and the Foreman College, Lahore. All these are maintained by Presbyterian societies, either British or American. The Roman Catholics have a large number of educational institutions, ranging from small village schools to great colleges preparing students for University degrees. But the proportion of Christian students in their institutions is very much larger than in those of the Protestant bodies. The proportion of literates amongst native Roman Catholics is probably lower than amongst the Protestant converts; but compared with Hindus and Mahomedans it is conspicuously higher. The Roman Catholics have some 3,000 elementary schools in which 98,000 boys and 41,000 girls are receiving instruction. In middle and high schools they have 143,000 boys and 73,000 girls and in University colleges about 5,000 students of both sexes. These figures, however, include a large proportion of Europeans and Eurasians, who are an almost negligible quantity in Protestant mission schools and colleges.

More recent, but producing even more widespread results, is the **Philanthropic work** of Christian missions. Before the great famine of 1878, missionaries confined themselves almost exclusively to evangelistic and educational activity. The famine threw crowds of destitute people and orphan children upon their hands. Orphanages and industrial schools became an urgent necessity. But the philanthropic spirit is never satisfied with one kind of organisation or method. A great stimulus was also given to medical missions. **Hospitals and dispensaries** have sprung up in all parts of the mission field; and leper asylums are almost a monopoly of Christian missionary effort. In 1911 the total number of medical missionaries working under Protestant societies in India was 118 men and 217 women, the majority of the former being also ordained ministers of religion. There are 184 industrial institutions in which 59 different arts and crafts are taught, ranging from agriculture to type-writing. In this department the **Salvation Army** hold a prominent place; and the confidence of Government in their methods has been shown by their being officially entrusted with the difficult work of winning over certain criminal tribes to a life of industry. The indirect effect of all this philanthropic activity under missionary auspices has been most marked. It has awakened the social conscience of the non-Christian public, and such movements as "The Servants of India" and the mission to the Depressed Classes are merely the outward and visible sign of a great stirring of the philanthropic spirit far beyond the sphere of Christian missionary operations.

Anglican Missionary Societies.

The Church Missionary Society carries on work in India in seven different missions—the United Provinces, South India, Travancore and Cochin, Bengal, Western India, Punjab and Sind and the Central Provinces and Rajputana. The names are in order of seniority. Work was begun in what are now called the United Provinces in 1813, in Bombay in 1820, in the Punjab in 1851, and in the Central Provinces in 1854. The Society has always kept Evangelistic work well to the fore; but it also has important medical missions, especially on the N.-W. Frontier, and many schools of the Primary, Middle and High standards. The Church of England Zenana Missionary Society is an offshoot of the C. M. S. controlling the work of 162 missionary ladies. The number of ordained European missionaries of the C. M. S. in India and Ceylon is 160, European laymen 30 and European laywomen 258. The Society claims a Christian community of 2,21,359 of whom 63,655 are adult communicants.

Society for the propagation of the Gospel. Statistics of the work of this Society are not easily ascertained, as much of it is done through Diocesan institutions, which, while financed and in many cases manned by the S. P. G., are entirely controlled by the Diocesan authorities. The best known of the S. P. G. missions is that at Delhi, commonly called the Cambridge Mission to Delhi, carrying on educational work at St. Stephen's College and School. At the College there are about 200 students under instruction, and at the High School 800. The College hostels accommodate 100 students. Missions to the depressed classes exist in Burma, in the Ahmednagar District and in several parts of South India, especially in the Diocese of Tinnevelly-Madura. There are 1,16,000 Indian Christians under the ægis of the S. P. G.; 90 ordained European missionaries and 98 European lady workers.

Other Anglican Societies.—The Oxford Mission to Calcutta was started in 880.

It works in the poorest parts of Calcutta and also at Barisal. There are 11 mission-priests of this Society, and 16 Sisters. In addition to its work amongst the poor, the Oxford Mission addresses itself to the educated classes in Bengal and issues a periodical called *Epiphany*, which is known all over India.

The Society of St. John the Evangelist (commonly known as the Cowley Fathers) has houses at Bombay and Poona, and small stations in the Bombay Konkan. In Bombay its missionary work centres round the Church of Holy Cross, Umarkhadi, where there is a school and a dispensary. The Christians are chiefly drawn from the very poorest classes of the Bombay population. At Poona the Society co-operates with the Wantage Sisters and in Bombay with the All-Saints Sisters. Other Anglican sisterhoods represented in India are the Clewer Sisters at Calcutta and the Sisters of the Church (Kilburn) at Madras. The St. Hilda's Deaconesses' Association of Lahore carries on important educational work (chiefly amongst the domiciled community) in the Punjab. The mission of the Scottish Episcopal Church at Nagpur, the Dublin University Mission at Hazaribagh, and the Mission of the Church of England in Canada working at Kangra and Palampur (Punjab) should also be mentioned under the head of Anglican Missions.

Bengal Ecclesiastical Department.

Lefroy, Most Reverend George Alfred, D.D. .. Lord Bishop of Calcutta and Metropolitan of India.

SENIOR CHAPLAINS.

Stokoe, Rev. Cecil George, M.A.	Services placed at the disposal of Governmen of Bihar and Orissa.
Firminger, Ven'ble Walter Kelly, M.A., B.D.	Archdeacon of Calcutta, and Chaplain of St. John's Calcutta.
Stuart, Canon Robert William Hall, B.A.	Darjeeling.
Smith, Rev. Joseph Frank, B.A., A.K.C.	St. James', Calcutta.
Keeling, Rev. Ernest William Phillips, B.A.	Chaplain, Kidderpore.
Drawbridge, Rev. W. H., M.A.	Services placed at the disposal of Assam administration.
Parker, Rev. William Almair Hodley	On leave.
Crozier, Rev. Philip Horsefall	Services placed at the disposal of Government of India.

And 11 Junior Chaplains.

CHAPLAINS OF THE CHURCH OF SCOTLAND.

Thomson, Rev. William, M.A.	Presidency Senior Chaplain. (On deputation to Murree.)
Jamieson, Rev. Robert George, M.A.	Officiating Presidency Senior Chaplain.

CHAPLAINS OF THE CHURCH OF ROME.

Meuleman, The Most Reverend Dr. Brice, S.J.	Archbishop.
Carbery, Rev. Fr. Philip, S.J.	Chaplain, Presidency Jail.

Bombay Ecclesiastical Department.

Palmer, Right Reverend Edwin James, M.A.	Lord Bishop of Bombay.
Barham, Rev. C. M., M.A. (on leave for 3 months from December).	Archdeacon of Bombay and Bishop's Commissary, and Chaplain of Deolali.
Bowen, John Cuthbert Grenside	Registrar of the Diocese.
Coles, Rev. A. H.	Honorary Canons of Bombay Cathedral.
Heywood, Rev. R. S.	
Joshi, Rev. D. L.	
King, Rev. C.	
Rivington, Rev. C. S.	

SENIOR CHAPLAINS.

Foote, Rev. Harold	Camp, Aden.
D'Alessio, Rev. Edward Samuel John, P.A.	Ahmednagar.
Mould, Rev. Horace	St. Mary's, Poona.
Kennelly, Rev. W. J. M.	St. Paul's, Poona.
Tibbs, Rev. Philip Gordon, B.A.	Kirkee.
Arnould, Rev. Henry Lloyd M.H.	Senior Presidency Chaplain.

And 17 Junior Chaplains.

CHAPLAINS OF THE CHURCH OF SCOTLAND.

Matthew, Rev. John Crombie, M.A., B.D. .. Senior Presidency Chaplain.

And 3 Junior Chaplains and 2 Probationary Chaplains.

CHAPLAINS OF THE CHURCH OF ROME.

Bruder, The Very Rev. A. .. Presidency.

Madras Ecclesiastical Department.

Whitehead, Right Reverend Henry, D.D. .. .. Lord Bishop of Madras.
Cox, Ven'ble Lionel Edgar, M.A. .. .. .. Archdeacon and Bishop's Commissary.
Rowlandson, Frederic, B.A., LL.B. .. .. .. Registrar of the Diocese and Secretary to the Lord Bishop.

Senior Chaplains.

Breay, Rev. Christopher Francis, M.A. .. .. St. Thomas' Mount with Pallavaram.
Bull, Rev. Edmund .. .. Bellary.
Giles, Rev. Clement Douglas, M.A. .. .. .. Fort St. George.
Flynn, Rev. Hugh Hamilton .. .. .. Secunderabad.
Hatchell, Rev. Christopher Frederic Wellesley, M.A. Services placed at the disposal of Government of Bombay.
Heycock, Rev. Francis Wheaton, M.A. .. .. Mercara and Mysore.

And 24 Junior Chaplains.

Church of Scotland.

Heron, Rev. John, M.A., B.D. .. .. Presidency Senior Chaplain, St. Andrew's Church, Madras. (On combined leave.)
Gillan, Rev. David Hedley, M.A., B.D. .. .. St. Andrew's Church, Madras.
Phillip, Rev. James Gibson .. .. St. Andrew's Church, Bangalore.
Mitchell, Rev. James Donald, M.A., B.D. .. .. Junior Chaplain, St. Andrew's Church, Secunderabad.

Assam Ecclesiastical Department.

Drawbridge, Rev. W.H., M.A. .. .. .. Shillong.
Wilcox, Rev. F. B., B.A. .. .. Darrang.
Cosserat, Rev. N. W. P., B.A... .. .. .. Lakhimpur.

Bihar and Orissa Ecclesiastical Department.

Stokoe, Rev. C. G, M.A. .. .. Senior Chaplain. (On combined leave.)

Junior Chaplains.

Ridales, Rev. A.C. .. .. Cuttack.
Newton, Rev. R.P., M.A. .. .. Dinapore.
Perfect, Rev. Henry .. .. Bhagalpur.
Green, Canon Arthur Daniel .. .. Monghyr and Jamalpur.
Payne, Rev. Russell, M.A. .. .. Muzaffarpur and Darbhanga.
Cosgrave, Canon W. F. .. .. Ranchi.
Moore, Rev. H. M. .. .. Bankipore.
Spooner, Rev. Harold .. .. Services placed at the disposal of the Government of India, Army Dept.

Burma Ecclesiastical Department.

Fyffe, The Right Reverend Rollestone Sterritt, M.A.. Lord Bishop of Rangoon. (On leave).
Blandford, Ven'ble Henry Weare, B. A. .. .. Archdeacon and Bishop's Commissary.

Senior Chaplains.

Collins, Rev. James Henry .. .. Port Blair.
Seeley, Rev. George Henry .. .. Maymyo.
Ellaby, Rev. George Alfred, B.A. .. .. .. Meiktila.

And 6 Junior Chaplains.

Central Provinces Ecclesiastical Department.

Chatterton, Right Reverend E., D.D. .. .. Lord Bishop of Nagpur.
Price, Ven'ble C., M.A. .. .. Archdeacon, Pachmarhi.

SENIOR CHAPLAINS.

Anstey, Rev. H. C. S., M.A. .. .. Nasirabad.
Clarke, Rev. W. L., M.A. .. .. Saugor.
Martin, Rev. F.W., M.A. .. .. Nagpur.

And 11 Junior Chaplains.

North-West Frontier Ecclesiastical Department.

SENIOR CHAPLAIN.

Muspratt, Rev. W., M.A. .. .. Hazara.

And 3 Junior Chaplains.

Punjab Ecclesiastical Department.

Durrant, Right Reverend H. B., M.A., D.D. .. Lord Bishop of Punjab, Lahore. (On Combined leave).

Syme, The Ven'ble James Greensill Skoltowe, M.A. Archdeacon (Simla).

SENIOR CHAPLAINS.

Becker, Rev. Charles Maxwell, M.A. .. .. .. On combined leave
Brookes, Rev. Joshua Alfred Rowland, M.A. .. Quetta.
Stanley, Rev. Albert Edward, M.A. .. .. .. On leave.
Muspratt, Rev. Walter, M.A. .. .. Hazara.
Stewart, Rev. Charles, B.A. .. .. Hyderabad (Sind).
Hickox, Rev. Sydney Ernest .. .. Sukker. On special duty.
Foster, Rev. Kenric George .. .. Dalhousie.
Cole, Rev. A. B. Farquharson .. .. .. Dalhousie Cantonment.
Markby, Rev. F. E. .. .. Jullunder.
Thomas, Rev. E. S. .. .. Ferozepore.
Wheeler, Rev. Hugh Trevor .. .. Serving under Government of India.
Fagan, Rev. High William Farquharson .. .. Multan.
King, Rev. John Blakeney .. .. Murree (Nearer) Gallis.

And 23 Junior Chaplains.

United Provinces Ecclesiastical Department.

Wescott, The Right Reverend George Herbert .. Lord Bishop of Lucknow.
Chapman, The Ven'ble Percy Hugh, M.A., LL.D. .. Archdeacon of Lucknow.
Pearson, H. G., Bar.-at-Law .. .. Registrar of the Diocese of Lucknow. (On leave out of India.)
Langford James, J.W. .. .. Officiating Registrar of the Diocese of Lucknow.

SENIOR CHAPLAINS.

Oldham, Rev. George Ernest, M.A. .. .. .. Roorkee. (On combined leave.)
Canney, Rev. Duncan Arnold .. .. .. Services placed at the disposal of the Punjab Government.
Menzies, Rev. Henry, M.A. .. .. Chanbatia.
Ninis, Rev. Richard Duncan .. .. Meerut.
Smith, Rev. H. T. P. .. .. Fyzabad.
Bell, Rev. William Lachlan, M.A. .. .. .. Services placed at the disposal of the Government of India, Army Department.
Kitching, Rev. W. L. W. .. .. Allahabad.
Ledgard, Rev. Ralph Gilbert .. .. Ranikhet.

And 13 Junior Chaplains with 8 Additional Clergy.

CHURCH OF SCOTLAND.

Two Junior Chaplains.

THE ROMAN CATHOLIC CHURCH.

With regard to numbers, the *Catholic Directory of India*, 1913, gives the following discrepant tables:—

	Civil Census 1911.	Ecclesiastical Estimate.
British India { Latin rite	1,430,582	1,535,820
British India { Syriac rite	413,142	364,660
Total, British India and Prot. States	1,843,724	1,900,480
Burma	60,282	88,447
Ceylon	339,300	322,163
Total, India, Burma and Ceylon	2,243,306	2,311,090
French India	....	25,918
Portuguese India	....	296,148
Ecclesiastical Grand Total	....	2,663,156*

* After trying to rectify discrepancies the *Directory* fixes as probable the following numbers:—

European and Eurasian Catholics	114,512
Baptised Native Catholics	2,423,286
Total	2,537,798

The Catholic community as thus existing is composed of the following elements:—

(1) The "Syrian" Christians of the Malabar Coast, traditionally said to have been converted by the Apostle St. Thomas. They were brought under allegiance to the Pope by the Portuguese in 1599, and placed first under Jesuit bishops and then under Carmelite Vicars Apostolic. They are at present ruled by four Vicars Apostolic of their own Syriac rite.

(2) Converts of the Portuguese missionaries from 1500 and onwards, starting from Goa and working in the south of the peninsula and up the west coast and in Ceylon.

(3) European immigrants at all times, including British troops.

(4) Modern converts from Hinduism and Animism in recent mission centres.

The Portuguese mission enterprise starting after 1500, continued for about 200 years, after which it began to decline. To meet this decline fresh missionaries were sent out by the Congregation *de propaganda fide*, till by the middle of the 19th century the whole country was divided out among them except such portions as were occupied by the Goa clergy. Hence arose a conflict of jurisdiction in many parts between the Portuguese clergy of the "padroado" or royal patronage, and the propaganda clergy. This conflict was set at rest by the Concordat of 1886. At the same time the whole country was placed under a regular hierarchy, which after subsequent adjustments now stands as follows:—

Of the **Portuguese Jurisdiction**:—

The archbishopric of Goa (having some extension into British territory) with suffragan bishoprics at Cochin, Mylapore and Damaun (all three covering British territory).

Of the **Propaganda Jurisdiction**:—

The archbishopric of Agra with suffragan bishoprics of Allahabad and Rajputana and the Prefecture Apostolic of Bettiah.

The archbishopric of Bombay, with suffragan bishoprics of Poona, Mangalore and Trichinopoly.

The archbishopric of Calcutta, with suffragan bishoprics of Dacca and Krishnagar, and the Prefecture Apostolic of Assam.

The archbishopric of Madras, with suffragan bishoprics of Hyderabad, Vizagapatam and Nagpur.

The archbishopric of Pondicherry (French) with suffragan bishoprics of Mysore, Coimbatore and Kumbakonam.

The archbishopric of Simla with suffragan bishopric of Lahore and the Prefecture Apostolic of Kashmere.

The archbishopric of Colombo (Ceylon) with suffragan bishoprics at Kandy, Galle, Jaffna and Trincomalee.

The archbishopric of Verapoly, with suffragan bishopric of Quilon.

Four Vicariates Apostolic of the Syriac rite for the Thomas Christians of Malabar.

Three Vicariates Apostolic of Burma.

The European clergy engaged in India almost all belong to religious orders, congregations or mission seminaries, and with a few exceptions are either French, Belgian, Dutch, Swiss, Spanish or Italian by nationality. They

number about 1,000 besides which there is a body of secular clergy mostly native to the country, numbering about 2,000 and probably about 2,000 nuns. The first work of the clergy is parochial ministration to existing Christians, including railway people and British troops. Second comes education, which is not confined to their own people; their schools being frequented by large numbers of Hindus, Mahomedans, Parsis, etc. Among the most important institutions are St. Xavier's College, Calcutta, St. Peter's College, Agra, St. Xavier's College, Bombay, St. Joseph's College, Trichinopoly, St. Aloysius College, Mangalore, teaching university courses; besides a large number of high schools and elementary schools. The education of girls is supplied for by numerous convent schools worked by religious congregations of nuns to say nothing of orphanages and other charitable institutions. The total number under education amounted in 1904 to 143,051 boys and 73,164 girls, later figures being unavailable.

As to missionary work proper, the country is covered with numerous mission centres, among which those in Chota-Nagpur, Gujerat, Orissa, the Nizam's Dominions, the Ahmednagar district and the Telugu coasts may be mentioned. (Full particulars on all points will be found in the Catholic Directory already quoted.) The mission work is limited solely by shortage of men and money, which if forthcoming would give the means to an indefinite extension. The resources of the clergy after the ordinary church collections and pay of a few military and railway chaplaincies are derived mainly from Europe, that is, from the collections of *the Society for the Propagation of the Faith* and of *the Holy Childhood*, helped out by private or other donations secured from home by the different local missionaries. In mission work the fathers count as enrolled only those who are baptised and persevering as Christians, and no baptism, except for infants or at point of death, is administered except after careful instruction and probation. This, while keeping down the record, has the advantage of guaranteeing solid results.

THE SCOTTISH CHURCHES.

The Church of Scotland.—The Chaplaincy work of the Church of Scotland dates from 1814, when the Rev. Dr. Bryce landed in Calcutta, and organised a congregation of his Scottish fellow countrymen. Since 1903 there have been eighteen chaplains on the staff, of whom nine belong to the Bengal Presidency, five to Bombay, and four to Madras. These minister both to the Scottish troops and to the civil population of the towns where they are stationed, but when there is a Scottish regiment the chaplain is attached to the regiment, instead of being posted to the station where the regiment happens to be placed and as a rule moves with the regiment. There are three Presidency senior Chaplains in charge of Bengal, Bombay, and Madras respectively. There are churches in the chief towns of the Presidencies, and churches have also been built, or are being built, in all considerable military stations, *e.g.*, Chakrata, Lucknow, Peshawar, Ranikhet, Rawalpindi, Sialkot and Umballa. In addition to the regular establishment there are a number of acting Chaplains sent out by the Colonial Committee of the Church of Scotland, and these are serving in such stations as Rawalpindi, Cawnpore, Meerut, Mhow, and Quetta. The Additional Clergy Societies in India contribute towards the cost of this additional establishment. In other places such as Sialkot, Murree, Dalhousie, Darjeeling and Lahore, regular services are provided by Scottish Missionaries. Simla has a minister of its own sent out from Scotland.

The Mission work of the Church of Scotland dates from 1829, when Alexander Duff, one of the greatest of modern missionaries, was sent to Calcutta. He was the first to open schools where English was made the medium for instruction, and where religious teaching was given daily. Similar educational missions were soon afterwards started in Bombay and Madras. Educational work is still an important branch of the mission work of the Church, but the Bombay College was closed in 1891 and in 1907 the College in Calcutta was united with the College of the United Free Church of Scotland, to form the "Calcutta Christian College." In the Punjab Evangelistic work is being carried on from eight centres under seventeen missionaries. The baptised Christian community now numbers almost 13,000. Work commenced in Darjeeling in 1870 is now carried on throughout the whole Eastern Himalayan district, and there is a Christian community there of over six thousand. In the five mission districts of Calcutta, the Eastern Himalayas, Madras, Poona, and the Punjab there were at the end of 1915 over 21,000 baptised Indian Christians. In connection with these missions the Women's Association of Foreign Missions does invaluable service in school, medical and zenana work, having in India 48 European missionaries, 145 teachers, over 50 schools, three hospitals and six dispensaries.

The Church of Scotland has also done much to provide education for European children in India. Together with the United Free Church St. Andrew's Church provides the governing body of the Bombay Scottish High Schools, which have always held a high place among such institutions, and exercises pastoral supervision over the Bombay Scottish Orphanage. In Bangalore there is the St. Andrew's High School, and both in Bangalore and in Madras the local congregation supports a school for poor children. The now well-known St. Andrew's Colonial Homes at Kalimpong, Bengal, though not directly part of the work of the Church of Scotland, were initiated by and are being locally managed by Missionaries of that Church. The homes exist for the benefit of the domiciled European Community, and are doing magnificent work. There are now fifteen cottages, and 437 children in residence. Further information may be found in "Reports of the Schemes of the Church of Scotland," Blackwood & Sons; "The

Church of Scotland Year Book" and "The Handbook of the Church of Scotland in India and Ceylon."

The United Free Church of Scotland.—This branch of the Scottish Church has only three purely European congregations in India, two in Calcutta, Wellesley Square, and Howrah and one in Bombay, Waudby Road. In Calcutta the Howrah Church is in the district of the mills, and every effort is made to minister to the Scottish Engineers and other workers in the mills. As noted above members of these congregations co-operate with the Established Church of Scotland in providing education for European children.

The Mission work of the Church is extended and varied. It is carried on in seven centres—in Bengal; in Santalia, with five stations; in Western India, including Bombay, Bombay District and Poona; in Hyderabad State including Jalna and Bethel; in Madras, with four stations; in the Central Provinces, including Nagpur, Nagpur District, Bhandara, Wardha and Amraoti; and in Rajputana where since 1,860 missions have been established in eleven districts.

There are at work in these centres 212 Scotch missionaries, together with a native staff of 311. Of organised Indian congregations there are 41, comprising 4,813 communicant members, and representing a Christian community of 13,749. Of schools there are 336 with 815 teachers and 14,494 scholars. A large part of this work is organised and supported by the women of the Church who have sent out as many as 81 of these missionaries. In connection with the medical work of the mission there are 19 hospitals where in the year 480,000 out-patients and 8,435 in-patients are treated, all of whom are brought under Christian instruction. There are four great missionary Colleges. There is the Madras Christian College, with 839 students, which reached its great success under the wise leadership of the Rev. Dr. William Miller, and which is now contributed to by five other Missionary Societies as well as that of the United Free Church. Representatives of these Missions, which include the C. M. S. and the Wesleyan Missionary Society, sit upon the College Board. There is the Scottish Churches' College in Calcutta, with over 1,152 students, the Hislop College at Nagpur with 505 students, and the Wilson College in Bombay with 1,047 students.

BAPTIST SOCIETIES.

THE BAPTIST MISSIONARY SOCIETY OF GREAT BRITAIN—Formed in 1792, largely through the efforts of Dr. Wm. Carey, operates mainly in Bengal, Bihar, the United Provinces, the Punjab, and Ceylon. The Baptist Zenana Mission has recently been united with this Society. The staff of the united Mission numbers 255 missionaries and about 1,000 Indian workers. Connected with the Society are 214 Indian Churches, 289 Day Schools, 17 Middle and High Schools, and 4 Theological Training Colleges. The Church membership at the close of 1916 stood at 13,102 and the Christian Community at 35,431. In the methods of the Society, the chief place is given to Bazaar and Village preaching. Increase in membership during the past ten years, about 30 per cent. and in the community 50 per cent. for the same period. Amongst the non-caste people great progress has been made in recent years, and Churches formed from amongst these peoples are self-supporting.

Special work amongst students is carried on in Calcutta, Dacca, Bankipore, Cuttack and Delhi, where Hostels have been erected for the prosecution of this form of work.

EDUCATIONAL WORK.—Ranges from Primary School to Colleges. Serampore College, the only College in India able to bestow a theological degree granted under Royal Charter by His Danish Majesty in 1827, and confirmed by the British Government in the Treaty of purchase of the Settlement of Serampore in 1845, and placed in 1856 by the College Council at the disposal of the Baptist Missionary Society to become a part of its Missionary Educational operations, Arts and Theological. It was affiliated in 1857 to the newly-formed Calcutta University; reorganised in 1910 on the lines of its original foundation with the appointment of a qualified Theological Staff on an Interdenominational basis for the granting of Theological Degrees to qualified students of all Churches.

As the only College in India granting a Theological Degree a large number of students are now resident in the splendid College Buildings. In Arts, the College prepares for the Calcutta Arts Examinations. *Principal*: Rev. G. Howells, M.A., B.D., B.LITT., PH. D.

A Vernacular Theological Institute, and High School likewise attaches to Serampore, as also at Delhi and Cuttack, for the training of native preachers.

There are 9 or 10 purely English Baptist Churches connected with the Society, but English services are carried on in many of the stations where an European population obtains. Medical work connected with the Society reported 5 Hospitals, 12 Dispensaries, and about 50,000 out-patients for the year 1916. Two large Printing Presses for both English and Vernacular work are conducted at Calcutta and Dacca. The Secretary of the Mission is the Rev. Herbert Anderson, 48, Ripon Street, Calcutta.

WOMEN'S MISSIONARY ASSOCIATION, B.M.S.—Extends over the same area practically as the above; there are 70 missionaries, 395 Indian Workers, 102 Girls' Day Schools, and 5 Girls' Boarding Schools in connection with this work; 751 villages are visited annually by Teachers and Missionaries engaged in Gospel work. A large place is given to medical work, 5 Hospitals with qualified staffs and 11 Dispensaries providing for 1,000 in-patients, and 68,000 out-patients for the past year. The Indian General Secretary of the Women's Missionary Association of the Baptist Missionary Society is Miss Angus, 44, Lower Circular Road, Calcutta.

THE CANADIAN BAPTIST MISSION.—Was commenced in 1873, and is located in the Eastern Telugu District to the north of Madras, in the Kistna, Godavari, Vizagapatam, and Ganjam Districts. There are 22 stations and 180 outstations with a staff of 89 missionaries, including 7 qualified physicians, and 654 Indian workers, with Gospel preaching in villages. Organised Churches number 70, communicants 10,113 and adherents 16,027 for the past year. Twelve Churches are entirely self-supporting. In the Educational department are 263 village Day schools, with 7,690 children, 10 Boarding schools, 2 High schools, a Normal Training school, a Theological Seminary providing in all for 825 pupils, and an Industrial school. There are 6 Hospitals and two leper asylums. The Mission publishes a Telugu newspaper. Village Evangelisation is the Central feature of the Mission, and stress is laid upon the work amongst women and children in particular. During the last decade membership has increased by 68 per cent., the Christian Community by 50 per cent., and scholars by 500 per cent. The Indian Secretary is the Rev. A. A. Scott, Tuni, Godavari District.

THE AMERICAN BAPTIST TELUGU MISSION.—Was commenced in the year 1836, and covers large parts of Nellore, Guntur, Kistna, and Kurnool Districts, and parts of the Deccan. Its main work is evangelism, but there is large Educational and Medical work in addition. There is an English Church in Madras. A large industrial Yerakala settlement is carried on at Kavali under the charge of one of the missionaries. Organized Telugu Churches, number 178, with 7?,0?4 baptised communicants. There has been a net increase of 1,000 per annum for the past twenty years. There are 112 Missionaries and 1,915 Indian Workers. There is a large Theological Seminary at Ramapatnam for the training of Indian preachers and a Bible School at Vinukonda for training Bible Women. In ordinary educational work 769 day schools, 26 Boarding Schools and 4 High Schools give training to 24,188 scholars. In Medical work 5 Hospitals report 1,708 in-patients and 19,583 out-patients for the year.

Corresponding Secretary: A. M. Boggs, Narsaravupet, Guntur District.

AMERICAN BAPTIST FOREIGN MISSION SOCIETY, organized in 1814, has Missions in Burma begun 1814; Assam 1836; Bengal and Orissa 1836; South India 1840. It owes its rise to the celebrated Adoniram Judson. Until 1910 the Society was known as the American Baptist Missionary Union. There are 31 main stations in Burma, 13 in Assam, 9 in Bengal and Orissa, 29 in South India, besides hundreds of outstations. All forms of missionary enterprise come within the scope of the Society.

The missionary staff numbers 398 in all, with an Indian workers' staff of 4,834. Communicants number 155,063. Organized churches number 1,359 of which 860 are self-supporting. Educational work is conducted on a large scale, the total number of schools of all grades being 1,952 with over 65,000 pupils. The Christian College has 74 students in college classes. There are ten High Schools with 3,562 pupils.

Medical work embraces 13 Hospitals and 35 Dispensaries, in which 78,020 out-patients and 1,832 in-patients were treated last year.

Indian Christians contribute annually more than Rs. 1,40,000 for religious and benevolent work within the Mission.

The great work of the Mission continues to be evangelistic and the training of the native preachers and Bible-women, and extends to many races and languages, the most important of which, in Burma, has been the practical transformation of the Karens, whose language has been reduced to writing by the Mission. The work in Assam embraces 9 different languages, and large efforts are made amongst the employers on the tea plantations. The Mission Press at Rangoon is the largest and finest in Burma.

Assam Secretary, Rev. W. Pettigrew, Gauhati, Assam.

Burma Secretary, Rev. H. J. Marshall, Tharrawaddy, Burma.

Bengal and Orissa Secretary, Rev. Howard R. Murphy, M.D., Midnapore, Bengal.

South India (or Telugu) Secretary, Rev. W. A. Stanton, D.D., Kurnool, Kurnool District, S. India.

THE TASMANIAN BAPTIST MISSION.—With 3 missionaries, is established at Siragunge, E. Bengal.

Secretary: Rev. E. T. Thompson, Mission House, Siragunge.

THE AUSTRALIAN BOARD OF BAPTIST FOREIGN MISSIONS.—Embracing the societies representing the Baptists of the States of the Australian Commonwealth. The field of operations is in East Bengal. The staff numbers 36 Australian workers. There are 1,461 communicants and a Christian community of 2,870.

Secretary Field Council: Rev. Hedley Sutton, M.A., Mission House, Mymensingh.

THE STRICT BAPTIST MISSION.—Has 10 Missionaries, and 86 Indian Workers in Madras, W. and the Trichy District. Communicants number 140; organised Churches 4; Elementary schools 25, with 1,200 pupils.

Secretary: Rev. E. A. Booth, Kilpauk, Madras, W.

AMERICAN BAPTIST, BENGAL-ORISSA MISSION commenced in 1836. Area of operation, Midnapore and Balasore districts of Lower Bengal. Mission staff 29, Indian workers 264. One English Church and 24 Vernacular Churches. Christian Community 5,000. One hospital and two dispensaries. Educational: One Theological and one High School, and 150 Elementary schools, pupils 4,880. Two Industrial schools for weaving and carpentering, &c. The Vernacular Press of this mission printed the first literature in the Santali language.

Secretary: Rev. Howard R. Murphy, M.D., Midnapore.

PRESBYTERIAN SOCIETIES.

THE IRISH PRESBYTERIAN CHURCH MISSION.—Operates in Gujerat and Kathiawar with a staff of 31 Missionaries of whom 2 are qualified doctors and an Indian staff of 529 including school teachers. There are 9 Organised Churches, a communicant roll of 1,557, and a Christian community of 5,885. In Medical work there are 2 Hospitals, 5 Dispensaries, with 609 in-patients and 13,714 out-patients. The Mission conducts 3 High schools, 3 Anglo-Vernacular schools, and 138 vernacular schools affording tuition for 6,607 pupils, 4 Orphanages, a Divinity College at Ahmedabad, a Teachers' Training College for men, a Teachers' Training College for women, both at Ahmedabad, and a Mission Press at Surat. The Mission has made a speciality of farm colonies, of which there are about a score in connection with it, most of them thriving.

The Jungle Tribes Mission with 4 missionaries is a branch of the activities of the above, working in the Panch Mahals and Rewa Kantha districts, with farm colonies attached.

Secretary: Rev. Hamilton Martin, B.A., Mission House, Wadhwan Camp.

THE UNITED PRESBYTERIAN CHURCH OF N. AMERICA.—Sialkot Mission was established in 1856 operating in the extreme North of the Punjab, and is practically the only Mission working amongst the 9,374 cities and villages of that district. Its missionaries number 78. Indian workers 718. There are 60 organised congregations with 499 outstations, a membership of 32,307, and a Christian community of 61,064. Women's Societies number 29. A theological seminary and a college, 4 high schools, 7 middle schools, 2 industrial schools, 2,220 primary schools, containing in all 12,315 pupils. In medical work there are 4 hospitals and 7 dispensaries with 1,626 in-patients and 55,476 out-patients for 1914.

Secretary: Rev. R. Maxwell, Gujranvala.

THE AMERICAN PRESBYTERIAN MISSION operates in 3 main sections known as the Punjab, North India and Western India Missions. The American Staff numbers 200 and Indian Staff 1,224. There are 29 main stations and 204 out-stations. Organized churches number 62, 17 of which are self-supporting. There are 9,502 communicants and a total baptized community of 61,212. Educational work as follows: 3 Christian Colleges, students, 1,327; Theological Schools, 2, students 60; Training Schools for village workers 2, students 150; High Schools 15, pupils 1,073; Industrial Schools 5, pupils about 150; Agricultural Demonstration Farms 4, students about 100; Teachers' Training Departments 7, students about 100; Medical students at Miraj 61; Elementary Schools 296; Schools of all grades 328, pupils 12,815. Medical Work: Hospitals 6; Dispensaries 11; in-patients 4,361; out-patient visits 149,487. Sunday Schools 424, with 13,682 pupils. Contributions for Church and Evangelistic work on the part of the Indian Church Rs. 22,840. Total Indian contributions for all purposes, including educational and medical fees and grants Rs. 5,29,923.

The Hospital at Miraj, under the care of Dr. W. J. Wanless and Dr. C. E. Vail is well known throughout the whole of S. W. India, and the Forman Christian College at Lahore under the principalship of Rev. J. C. R. Ewing, D.D., C.I.E., is equally well-known and valued in the Punjab. The Allahabad Christian College (Dr. C. A. R. Janvier, Principal) is growing rapidly and its agricultural department has become increasingly prominent. Woodstock College for Women at Mussoorie, Principal Rev. E. M. Wherry, D.D., is one of the largest and most valuable institutions of this description in Northern India.

Secretary of Council of A.P. Missions in India: Rev. H. D. Griswold, Ph. D., D.D., Saharanpur.

Secretary, Punjab Mission: Rev. E. D. Lucas, Lahore.

Secretary, North India Mission: Rev. R. C. Smith, Fatehpur, Haswa.

Secretary, Western India Mission: Rev. H. K. Wright, B.A., Vengurla.

THE NEW ZEALAND PRESBYTERIAN MISSION.—Commenced as recently as 1910 at Jagadhri, Punjab.

Secretary: Miss A. E. Henderson, Jagadhri.

THE CANADIAN PRESBYTERIAN MISSION.—Commenced in 1877, has 14 main Stations in the Indore, Gwalior, Rutlam, Dhar, Alirajpur, Jaora, Sitamau, Banswara, &c. Native States—The Mission staff numbers 72, Indian workers 241, Organized Churches 13, Communicants (September 30, 1916) 1,108, Baptised non-communicants 2,219, Unbaptised infants and catechumens 151. Total Christian Community 3,478; Educational work comprises Elementary and Middle Schools, High Schools for boys and girls, College, Theological Seminary and Classes. Industrial teaching and work are done in three Girls' Orphanages, in the Women's Industrial Home, and at Rasalpura which last includes the Mission Press and the School for the blind. The Medical work is large, chiefly among women.

Secretary: Rev. J. Fraser Campbell, D.D., Rutlam, C. I.

THE GERMAN EVANGELICAL SYNOD OF NORTH AMERICA.—Commenced work in the C. P. in 1865. The mission staff numbers 23; Indian Christian workers 310; Communicants 1,815; total Christian community 4,008; Organised Churches 6; one Theological school with 10 students; one High School with 90 students and 64 other schools with 3,956 students. The mission has 2 Hospitals and 6 Dispensaries which in 1914 treated 18,013 patients.

Secretary: Rev. F. A. Goetsch, Bisrampur.

THE WELSH CALVINISTIC METHODIST MISSION (OR WELSH PRESBYTERIAN MISSION) established in 1840 with a staff of 32 Missionaries, 600 Native workers, occupies stations in Assam in the Khassia and Jaintia Hills, the Lushai Hills and at Sylhet and Cachar. The Khassia language has been reduced to writing, the Bible translated, and many books published in that language by the Mission. Communicants number 14,000, the total Christian community 42,000; organised Churches 450; self-supporting Churches 30. Elementary schools number 510, scholars 15,000; Boarding

schools 3, scholars 820, in addition to 1 Industrial school, 4 Training institutions and 1 Theological Seminary. Two Hospitals and 3 Dispensaries provided for 10,000 patients in 1914.

Secretary: Rev. J. Ceredig Evans, Shillong.

THE ARCOT MISSION of the Reformed Church in America (Dutch), organised in 1853 occupies the Arcot and Chittoor districts in S. India with a staff of 29 Missionaries, and 594 Indian ministers and workers. Churches number 19, Communicants 3,936, total Christian community 11,298; Boarding schools 11, scholars 528; Theological school 1, students 37; High schools 4, scholars 1,219; Training schools 2, students 44; Industrial schools 2, pupils 95; Elementary schools 181, scholars 6,945. Three Hospitals, 7 Dispensaries with staff of 38, provided for 2,217 in-patients and 82,052 out-patients for the past year.

Secretary: Rev. H. J. Scudder, M.A., & B.D., Punganur, S. India.

CONGREGATIONAL SOCIETIES.

THE AMERICAN BOARD OF COMMISSIONERS FOR FOREIGN MISSIONS.—Has two large Missions, the American Marathi Mission, and the Madura Mission. The Marathi Mission includes a large part of the Bombay Presidency, with centres at Bombay, Ahmednagar, Satara and Sholapur, and was commenced in 1813, the first American Mission in India. Its activities are large and varied. The staff at the beginning of 1917 consisted of 52 missionaries and 608 Indian workers operating in 151 outstations exclusive of Bombay City. Organised Churches number 65 with 8,152 communicants, and 6,298 adherents. There is a Leper work at Sholapur. The Educational work embraces 17 training and secondary schools, with 873 pupils and 179 primary schools, with 6,884 pupils, three-fifths of whom are non-Christians. A large Theological Seminary at Ahmednagar trains for the Indian Ministry. Zenana work and Industrial work are vigorously carried on, the latter embracing carpentry, metal hammering, lace work, carpet weaving and extensive work on an improved hand loom. A school for the blind is conducted on both Educational and Industrial lines. 47,168 patients were treated in the Hospitals and Dispensaries of the Mission last year. The Mission has for 70 years published the "Dnyanodaya," the only combined English and Marathi Christian weekly newspaper. Special evangelistic work is carried on amongst the tribes known as the Bhils and Mangs. This Mission was the first to translate the Christian scriptures into the Marathi tongue.

THE MADURA MISSION.—In the S. Madras District, commenced in 1834, has a staff of 51 missionaries and 830 Indian workers, operates in the Madura and Ramnad districts and has a communicant roll of 8,989 with 26,438 adherents and 35 organised churches, many of which are entirely self-supporting and self-governing. Schools number 262 with 13,117 pupils. There is a Christian College at Madura, as also Hospitals for men and women; at Pasumalai are a Theological Institution, Industrial School, Teachers' Training School and Printing Press. The Secretary of the Marathi Mission is the Rev. A. H. Clark, Ahmednagar; and of the Madura Mission, the Rev. C. S. Vanghan, Manamadura.

The Arcot Mission commenced under the American Board was transferred to the Reformed Church of America in 1851.

THE SCANDINAVIAN ALLIANCE MISSION OF NORTH AMERICA.—Embraces two Branches, one in Bengal and the other in Khandesh. The total mission staff is represented by 10 missionaries and 27 Indian workers. There are 62 communicants and a Christian community of 158. Ten Elementary Schools provide for 160 pupils.

Secretaries: Rev. O. A. Dahlgren, Navapur, Khandesh, and Miss H. Abrahamson, Domar, Bengal. The Branch in Khandesh co-operates with the Swedish Alliance Mission, and both missions having a united yearly conference.

THE SWEDISH ALLIANCE MISSION.—Working among the Bhils in West Khandesh has 15 missionaries and 26 Indian workers. There are 5 congregations with a total membership of 470, of whom 220 are communicants. There are 5 Elementary Schools, 2 Boarding Schools and one Industrial School. The pupils are 90.

Secretary: Rev. Enok Hedberg, Nandurbar, West Khandesh.

THE SCANDINAVIAN ALLIANCE MISSION, HIMALAYAS.—(Finnish Branch). The total mission staff is represented by nine missionaries and six native workers. There are about 80 Communicants, five churches and a Christian community of about 100. One Orphanage with 23 orphans, one Kindergarten school, one Upper Primary school and three Day schools with about 70 pupils. *Acting Secretary*: Miss Klara Hertz, Lachen, *via* Gangtok, Sikkim.

THE LONDON MISSIONARY SOCIETY.—Commenced work in India in 1798 and occupies 10 centres in N. India, 12 in S. India and 7 in Travancore. The Mission engages in every form of Missionary activity. The European staff numbers 223, Indian workers 2,004; Organised Churches 490; Communicants 13,748 and Christian community 116,575. There are 4 Christian Colleges, students 159; 3 Theological Institutions, students 41; 4 Training Institutions, pupils 114; 22 High schools, pupils 4,849; 25 Boarding schools, scholars 1,167; 9 Industrial schools, pupils 116 and 862 Elementary schools with 36,775 scholars. In Medical work Hospitals number 15, Dispensaries 15, qualified doctors 10, and 3,997 in-patients and 130,220 out-patients for the year.

The main centres of the Mission in N. India are at Calcutta, Benares and Almora. The Bhowanipur Institution at Calcutta is now a Teacher Training College, Evangelistic work is carried on amongst the thousands of pilgrims visiting Benares, and Almora is noted for its

Hospital and Leper Asylum. Special efforts are made amongst the Nama Sudras and the aboriginal tribes known as the Majhwars, Cheros and Pankas. The S. India district is divided into the Kanarese, Telugu and Tamil areas, with 12 stations and 472 outstations. At Nagercoil, (Travancore) is the Scott Memorial College *with* 935 students, a Church and congregation said to be the largest in India, and a large Printing Press, the centre of the S. Travancore Tract Society.

N. India Secretary: Rev. J. H. Brown, B.A., B.D., Calcutta.

S. India Secretary: Rev. E. P. Rice, B.A., Bangalore.

ALL-INDIA MISSIONS.

THE CHRISTIAN AND MISSIONARY ALLIANCE —Dates from the year 1893 under the name of the International Missionary Alliance, but a number of its missionaries were at work in Berar Province much earlier. The work is confined to the provinces of Berar, Khandesh and Gujerat. There is a staff of 72 missionaries and 132 Indian workers. The number of Mission stations is 19, with additional outstations. There is a Christian community of 2,870 people. There are 4 orphanages, 2 for boys and 2 for girls: 3 training schools for Indian workers, and 1 English congregation at Bhusawal. *Secretaries:* for Gujarat: Rev. J. N. Culver, Viramgam, Gujarat; for Berar and Khandesh: Rev. S. H. Averuheimer, Malkapur, Berar.

THE CHURCH OF THE BRETHREN (AMERICAN) —Opened work in 1895, and operates in the Southern part of Gujerat, Khandesh, and Thana Districts. Its staff numbers 29 including missionaries' wives, and 105 Indian workers. The baptised (immersed) membership stands at 1,125; education is carried on in 2 Girls' Boarding schools, 4 Boarding schools for boys, and 31 Village Day schools. Industrial work is connected with four of the schools, and a Farm Colony is established at Umballa.

THE POONA AND INDIAN VILLAGE MISSION— Founded in 1893 operates in the Poona, Satara and Sholapur Districts, with 23 European and 32 Indian workers. The number of Indian Christians is 40. The main work is evangelism of the villages, with Women's Zenana work, and Village schools. There are 4 Village Dispensaries, including a large medical work in the great pilgrimage city of Pandharpur, and a hospital at the head-quarters of the Mission, Nasrapur, in the Bhor State. *Secretary:* Mr. J. W. Stothard, Nasrapur, Poona District.

THE AMERICAN CHURCHES OF GOD MISSION —Has two missionaries at Bogra, Bengal.

THE INDIAN CHRISTIAN MISSION—Founded in 1895, has 31 Organised Churches, 11 Missionaries, 24 stations, 41 out-stations, 1,392 Communicants, and 28 Primary schools in the Ellore district, S. India, stations also in Berenag, Kumaon, N. India, and Nuwara Eliya, Ceylon. *Secretary:* A. S. Paynter, Nuwara Eliya, Ceylon.

There are 3 PENTECOSTAL MISSIONS at work. The Pentecostal Mission in W. Khandesh and Thana Districts; the Pentecostal Church of the Nazarine Mission at Buldana, Berar, and the Pentecost Bands of the World Mission with a Boys' Orphanage at Dondi Lohara, C. P., a Girls' Orphanage at Raj Nandgaon, and a Leper Home at Raj Nandgaon. The staff consists of 14 missionaries and 28 native preachers and Bible women.

THE SANARPUR AND LOHAGHAT DISTRICT BIBLE AND MEDICAL MISSION—Was established at Lohaghat, 48 miles from Almora, in 1910. Amongst the *faith* missions are the Vanguard Mission at Sanjan; Thana District, with 6 Missionaries; and the Church of God Mission with 7 Missionaries at Lahore. The Burning Bush Mission has a staff of 8 Missionaries at Allahabad The Tehri Border Village Mission is the only Christian enterprise in the Himalayan Native State of that name, its agents are stationed at Landour, and have translated portions of the New Testament into the Tehri-Garhwali language. *Secretary:* Miss A. N. Budden.

THE HEPHZIBAH FAITH MISSIONARY ASSOCIATION has six missionaries. *Agent:* D. W. Zook, Adra, B. N. Ry.

THE TIBETAN MISSION—Has 5 Missionaries with headquarters at Darjeeling, and Tibet as its objective. *Secretary:* Miss J. Ferguson, Darjeeling.

THE INDIAN MISSIONARY SOCIETY OF TINNEVELLY (DORNAKAL MISSION)—Opened in 1904, operates in the Warangal District of the Nizam's Dominions. It is the missionary effort of the Tamil Christians of Tinnevelly. There are now 1,550 Christians in 46 villages. *Secretary:* Mr. J. Anbudaiyan, B.A., L.T., Palamcottah.

THE MISSION TO LEPERS—Founded in 1874, is an interdenominational and international Society for the establishment and maintenance of Asylums for Lepers and Homes for their untainted children, working largely in India, China, and Japan. Its work in India is carried on through co-operation with 29 Missionary Societies. The Mission now has 39 Asylums of its own with over 4,223 inmates, and is aiding or has some connection with work for lepers at 21 other places in India. In the Mission's own and aided Asylums there are about 3,100 Christians. The total number of lepers reached by the Mission in India is about 5,000.

An important feature of the work of the Mission is the segregation of the untainted or healthy children of lepers from their diseased parents. 550 children are thus being segregated and saved from becoming lepers.

The Mission very largely relies on voluntary contributions for its support. *Patroness:* The Dowager Duchess of Dufferin and Ava. *President:* The Primate of Ireland. Head Office, 28, North Bridge, Edinburgh. Mr. Wellesley C. Bailey, General Superintendent. *General Secretary:* Mr. W. H. P. Anderson, 20, Circular Place, Dublin. (Communications and subscriptions may be sent to Mr. T. Dobson, Scottish Mission Industries, Poona).

THE REGIONS BEYOND MISSIONARY UNION —An interdenominational Society commenced work at Motihari, Behar, in 1900, and now occupies 4 stations and 7 outstations in the Champaran and Saran Districts, with a staff of 13 Europeans, and 34 Indian workers. There are 21 Elementary schools, with 517 pupils, a Girls' and a Boys' Orphanage and Boarding school, communicants number 50.

THE NATIONAL MISSIONARY SOCIETY OF INDIA —Established 1905, it has a staff of 35 Indian Missionaries, operates in Montgomery District (the Punjab), Nukkar Thasil (U. P.), North Kanara (Bombay), Karjat-Karmala Talukas (Bombay), Omalur (Madras) and Bhagalkund Agency (C.I.). Christian community 2,000. Twelve schools. Two Dispensaries. Organ: *The National Missionary Intelligencer* (a monthly journal in English sold at 8 as. per year post free).

General Secretaries: Mr. K. T. Paul, B.A., L.T., and Mr. P. O. Philip, B.A., N. M. S. Office, Royapettah, Madras.

THE SEVENTH DAY ADVENTISTS.—Established in India in 1895. Work carried on in English, Hindi, Urdu, Bengali, Santali, Tamil, Telugu, Malayalam, Marathi, Gujerati, Burmese and and Karen; including schools, dispensaries and evangelical stations. *President*: W. W. Fletcher, 17, Abbott Road, Lucknow; *Treasurer*: A. H. Williams; *Secretary*: R. D. Brisbin.

THE AMERICAN MENNONITE MISSION.—Established 1899, works in the C. Provinces. Mission staff numbers 20, Indian workers 80, Church members 581, 1 Industrial Training Institution, 1 High School, 1 Bible School, 2 Orphanages, 1 Widows' Home, 1 Leper Asylum, Elementary Schools 8; Dispensaries 3, Hospital 1. *Superintendent*: Rev. P. A. Friesen, P. O. Jamgaon, *via* Drug, C. P.

THE MENNONITE MISSION GENERAL CONFERENCE—Started in 1901 in the C. Provinces. Workers number 11; Leper, Medical, Orphan and village work carried on. From the Leper Asylum 230 have been baptised. *Secretary*: Rev. P. W. Penner, Jangir, C.P.

THE KURKU AND CENTRAL INDIA HILL MISSION—Established 1890 in the C. P. and Berar, has a mission staff of 14, Indian workers 20; Churches 6, Communicants 105; Christian community 209; 2 Boarding and 5 Elementary schools, with 74 pupils. *Secretary*: Rev. Carl Wydner, Ellichpur, Berar.

THE CEYLON AND INDIA GENERAL MISSION—Established 1893, occupies stations in India in the Coimbatore and Anantapur Districts. Mission staff 23; Indian workers 70; Churches 10, with Communicants 256, and Christian community 756; Orphanages 3; Elementary schools 27; pupils 641.

Secretary: Pastor W. Mallis, Coonoor, Nilgiris.

THE BOYS' CHRISTIAN HOME MISSION—Owes its existence to a period of famine, was commenced in 1889. Mission staff 11, Indian workers 22. There are elementary schools with 52 children, two orphanages and a Widows' Home, where Industrial training is given. There are three Mission Stations—At Dhond, and at Bahraich, and Benares in United Provinces. *Director*: Rev. Albert Norton, Dhond, Poona District.

Ladies' Societies.

ZENANA BIBLE AND MEDICAL MISSION.—This is an interdenominational society, with headquarters in London, working among women and girls in seven stations in the Bombay Presidency, one in Madras, fourteen in United Provinces, and five in the Punjab. There are 76 European Missionary ladies on the staff and 28 Assistant Missionaries, 192 Indian workers, teachers and nurses and 78 Bible women. During 1915 there were 1,460 in-patients in the five hospitals supported by the Society (Nasik, Benares, Jaunpur, Lucknow and Patna), but the Victoria Hospital, Benares, was practically closed in 1914 and so instead of about 600 in-patients there were only 22 and 20,803 out-patients. In their 62 schools were 3,430 pupils, while 93 women were under training as teachers. The evangelistic side of the work is largely done by house to house visitations and teaching the women in Zenanas; 3,248 women in 2,778 houses were so taught. The 78 Bible women visited 491 villages; the number of houses was 1,621.

THE LUDHIANA ZENANA AND MEDICAL MISSION has removed its headquarters to Lahore leaving one Bible woman working in the city of Ludhiana. Four missionaries are in Lahore and work is being carried on in the Lahore District in connection with the American Presbyterian Mission.

THE MISSIONARY SETTLEMENT FOR UNIVERSITY WOMEN was founded in Bombay in 1895 to reach the higher class of Indian ladies, its activities now include a hostel for women students, in addition to educational, social, and evangelistic work. *Warden*, Miss Dobson, Girgaum, Bombay.

THE MUKTI MISSION, the well-known work of Pandita Ramabai, enables upwards of 350 widows, deserted wives and orphans to earn a comfortable living by means of industrial work organised by the Pandita, supported by a good staff of Indian helpers. A large staff of European Missionary Ladies do evangelistic work in the surrounding Kedgaon, Poona District.

Disciple Societies.

The India Mission of the Disciples of Christ (Foreign Christian Missionary Society of Cincinnati, Ohio, and Christian Women's Board of Missions of Indianopolis combined) commenced work in 1882; its area Central and United Provinces; number of Indianopolis Churches 14, and immersed communicants 1,560. Its staff, including Missionaries' wives, 67; Asst. missionaries 3, and Indian Worker's staff 301. There are 7 Hospitals, 17 Dispensaries, with 122,500 in-patients and out-patients for the past year. Three Orphanages and an Industrial Home show 618 inmates. Two leper asylums with 132 inmates. In connection with the industrial work a farm of 400 acres has been taken at Damoh. There are 8 Middle schools, 41 Primary schools with 3,126 scholars; 2 Boarding schools, with 247 students. An active zenana work is carried on, and there is a home for women and children.

The Australian branch has three Mission stations in Poona District. The Great Britain and Ireland branch has two mission stations, one in Mirzapur District, U. P., and one in Palamau District, Orissa. These have no organic connection with the India Mission of the Disciples of Christ.

Secretary: Rev. D. O. Cunningham, M.A., Bilaspur, C.P.

Undenominational Missions.

THE CENTRAL ASIAN MISSION, with a Church, Dispensary and School is found on the N.-W. Frontier, conducted on the lines of the China Inland Mission, and has Kafristan as its objective.

The Friends' Foreign Missionary Association with Headquarters at Hoshangabad, Central Provinces, commenced in 1874. Work has recently been opened up in the Gwalior and Bhopal States. There are 5 Churches, 27 Missionaries, 195 members, Orphanages for Boys and Girls, 1 Anglo-Vernacular school, 15 Day Schools, one High School and one Zenana Hospital with a general dispensary connected with the Mission, in addition to a self-supporting weaving community at Itarsi, and Industrial Works and a Farm Colony at Hosangabad. *Secretary:* Mr. Henry I. Robson, Sohagpur, C. P.

The American Friends' Mission with 5 Missionaries is working at Nowgong. *Secretary:* Miss D. Fistler, Nowgong, C. I.

The Old Church Hebrew Mission was established in 1858, in Calcutta, and is said to be the only Hebrew Christian Agency in India. *Secretary:* J. W. Pringle, Esq., Calcutta.

THE OPEN BRETHREN—Occupy 46 stations in the U. Provinces, Bengal, S. Mahratta, Godaveri Delta, Kanarese, Tinnevelly, Malabar Coast, Coimbatore and Nilgiri Districts. They hold an annual Conference at Bangalore.

Lutheran Societies.

(Several of the German Missions mentioned below have suspended or curtailed their work).

The American Evangelican Lutheran Mission. General Council, founded in 1844 for the Godaveri and Kistna Districts, has its Headquarters at Rajahmundry. Its staff consists of 27, including Missionaries' wives and Lady Doctors, with 484 Indian Workers. The membership is 23,620. There are Boys' and Girls' Central Schools, Mission Press, a well-equipped hospital and Book Depot at Rajahmundry, and a High School at Peddapur. *Chairman:* The Rev. C. F. Kuder, M.A., Rajahmundry.

The 'General Synod' Section of the above, has its headquarters in Guntur, founded in 1842. Its Christian community numbers 46,594, with 16,242 communicants, 27 missionaries inclusive of wives, and 815 Indian workers, shewing an increase of 61 per cent. during the past ten years. The following institutions are connected with the Mission, a second grade College, High school for Girls, Hospital for women and children, Normal training School, and Industrial School. *Secretary:* the Rev. Victor McCauley, Guntur.

THE EVANGELICAL NATIONAL MISSIONARY SOCIETY OF SWEDEN, founded in 1856, occupies the districts of Betul, Chindwara and Saugor in the Central Provinces. There are 1,826 Church members and 11 Indian Congregations. The staff numbers 29 including women, with an Indian staff of 170. Schools number 42 with 1,677 children. Only two of the schools are Secondary, all the rest are Primary Schools. There are small dispensaries at most of the stations. *Secretary:* Rev. P. E. Froberg, Chhindwara, C. P.

The Hermannsburg Evangelical Lutheran Mission began its work in India in 1866 and operates in the South Nellore, the East Chittoor, and South-East Cuddapah Districts. There are 22 Indian Churches; 13 European Missionaries and 178 Indian workers, Church members number 3,170. Women's work is done in 3 stations, with a large Industrial school for 70 girls, in a fourth, in addition to Zenana and Educational work. There are 91 Lower grade Elementary schools, 1 High school, 1 Lower Secondary, and 2 Higher grade schools, and a Theological Seminary and Training school. A Leper Asylum is stationed at Kodur with a Dispensary, and a large Industrial school at Nayudupeta. Since the beginning of 1914 a part of the field of the Hermannsburg Mission has been ceded to the Ev. Luth. Joint Synod of Ohio and other States in U. S. America, who had expressed the wish to enter the field. Kodur and Puttur with the leper asylum at Kodur was ceded to them with 2 European missionaries, 26 Indian workers and 424 church members. The Hermannsburg Missions secretary is as yet acting for the Ohio Mission also. *Secretary:* Rev. J. Rohwer, Gudur, Nellore Dist., Madras.

The Schlesswig Holstein Evangelical Lutheran Mission, commenced in 1881, operates in the Vizagapatam District. This is one of the Missions which was manned by Germans, who were all in due time repatriated. The Mission is annexed to the A. E. L. Mission, with headquarters at Rajahmundry. The Government sanctioned the appointment of the Rev. E. Neudoerffer, a Canadian. All property is in his charge, and he may collect outstanding debts, but to be kept at the disposal of the Government of Madras.

To-day the status of the Mission is as follows:—17,000 Christians, 4,800 communicants, 330 Evangelist, 26 School teachers. Hitherto schools were far and few between, but an effort is now being made to do more work among the children.

CHURCH OF SWEDEN EVANGELICAL LUTHERAN MISSION—Northern Circle (formerly Leipzig Evangelical Lutheran Mission). Commenced 1834, taken over by the Church of Sweden Mission Board, 1915. Confined to the Tamil-speaking areas, chiefly in the Madras Presidency, with an Indian ministry and Church in Rangoon and Penang. European staff numbers 10. Ordained Indian ministers, 32 and 74 Indian workers. Organised Churches, 33. Places of worship, 221. Baptised membership, 18,497. There are 172 boys' schools, and 17 girls' schools. Teaching staff 346 and pupils 8,354. The Schools are managed by a British committee. *Secretary.* The Rev. D. Bexell, Kilpauk, Madras.

THE BASEL MISSION was commenced in 1834, and occupies 26 main stations and 128 outstations in the Coorg, S. Mahratta, Nilgiris, and N. and S. Canara districts of S. W. India. The total European Staff numbers 41 with 1,110 Indian workers. There are 66 organised Churches, with a membership of 19,762. Educational work embraces 204 schools (including 2 Theological, 9 Boarding and 4 High schools) with 16,970 Elementary and 3,150 Secondary school pupils and 831 scholars in Boarding Institutions and Orphanages. There are good Hospitals at Betgiri and Calicut under European doctors with 3 branch hospitals and 4 Dispensaries connected; 66,804 patients were treated last year. There is a Leper Asylum at Chevayur.

The Industrial work of the Mission is second to none in India and comprises 17 establishments, embracing one mechanical establishment of a first rate order at Mangalore, 2 Mercantile branches, 7 Weaving and 7 Tile work establishments in the Kanara and Malabar districts; employés number 3,633. A large Printing Press at Mangalore issues publication in the Kanarese, Malayalam, Tulu and

English languages. Owing to the internment of a number of missionaries belonging to the Basel Mission, it has been impossible to revise the above figures most of which are for 1914. *Secretary*: Rev. B. Luthi, Mangalore.

THE CHURCH OF SWEDEN MISSION—Was founded in 1874. Operated till 1915 in the Madura, Tanjore, Trichinopoly and Ramnad Districts. Since 1915 the Mission having taken full charge of the former Leipzig Evangelical Lutheran Mission field, works also in the Madras, Chingleput, Coimbatore, Salem and S. Arcot Districts with diaspora congregations in Rangoon, Penang and Colombo. European staff numbers 21. Ordained Indian Ministers 36, Indian workers 74. Organised Churches 41, Baptised Membership 20,782. Schools 263, Pupils 12,312 (9,394 boys, 2,918 girls). Teaching staff 620. *Secretary*, Rev. E. Heuman, P.H.D., Trichinopoly.

THE MISSOURI EVANGELICAL LUTHERAN MISSION—Is located in Arcot, Tinnevelly and Travancore with a staff of 9 Missionaries. Two Training schools, 169 pupils, and 49 Elementary schools with 2,272 pupils are connected with the Mission. *Secretary*: Rev. J. Harmr, Trivandrum, Travancore.

THE DANISH EVANGELICAL LUTHERAN MISSION.—Established 1863 in South Arcot, working there and in North Arcot, on the Shevaroy Hills and in Madras, has a total staff of 44 Missionaries and 211 Indian workers. Communicants 904, Christian community 2,210, 1 High School, 2 Boarding Schools, 4 Industrial Schools, Elementary Schools 58, total scholars 3,484; Dispensary patients 21,849.
Chairman: Rev. J. Bittmann, 38, Broadway, Madras.

THE GERMAN EVANGELICAL LUTHERAN (GOSSNER'S MISSION)—Founded 1836, occupies stations in Bengal, Bihar and Assam; the Mission staff numbers 92, Indian workers 1,017; Communicants 34,208, and Christian community over 100,000; organised Churches, 437. Theological and Teacher's Seminaries: 66 pupils. Boarding Schools: 39. Elementary Schools: 277. Pupils in schools: 9,355. Leper asylum: 728 inmates. Lace schools in Ranchi and Purulia. *Secretary*: Rev. Paul Wagner, Purulia, B. N. Rly., Manbhum, Bihar, Headquarters, Fridenaw, Berlin, Germany.

THE SANTAL MISSION OF THE NORTHERN CHURCHES (formerly known as the India Home Mission to the Santals)—Founded in 1867, works in the Santal Parganas, Goalpara (Assam), Malda and Dinajpur. Work is principally among the Santals. The mission staff numbers 24; Indian workers 342; communicants 3,000; Christian community 18,000; organised churches 36; boarding schools 2; pupils 316; elementary schools 31; pupils 535; industrial school, 1. *Secretary*: Rev. P. O. Bodding, Dumka, Santal Parganas.

Methodist Societies.

The Methodist Episcopal Church began its Indian Mission in 1857, and with the exception of Assam, and the N W. Frontier Provinces is now established in all the political Divisions of India. Its number of baptised Christians stands at 266,275, under the supervision of 240 ordained and 900 unordained Ministers. Schools of all grades number 1,569 with 39,087 students, Sunday School scholars stand at 126,000, and young peoples' societies at 604, generally known as Epworth Leagues. Thirty Anglo-Indian Congregations are found in the larger Cities, with one College, 6 High schools, and numerous Middle schools for this class, For Anglo-Vernacular Education the mission has 3 Colleges, 12 High schools and 62 schools of Lower grade. The net increase from the non-Christian races has been at the rate of 15,000 per annum, for the last decade. The Isabella Thoburn Training College at Lucknow is a large Institution. There are large printing presses at Calcutta, Madras and Lucknow.

In Burma there are 9 schools, with 1,484 pupils, a large Boarding and Day school for European girls at Rangoon, a hill station Boarding school for girls at Thandaung, and an Anglo-Indian Church at Rangoon.

While financially supported by the Board of Foreign Missions of the American Methodist Episcopal Church, ecclesiastically the Church in India is independent of foreign control, being under the supervision of its own bishops, *viz.*, *Bishop*, F. W. Warne, Lucknow. *Bishop*, J. E. Robinson, Bangalore, and *Bishop*, J. W. Robinson, Bombay.

The American Wesleyan Church with 5 Missionaries, has in recent years taken over an independent Mission at Pardi and Daman, Gujerat District. *Secretary*: Rev. A. E. Ashton, Pardi.

The Reformed Episcopal Church of American (Methodist) at Lalitpur and Lucknow U. P. has 2 Missionaries, 4 Outstations, 2 Orphanages, and a membership of nearly 100.

THE WESLEYAN METHODIST MISSIONARY SOCIETY commenced work in India in 1817 (Ceylon in 1814). The Mission in India is organised into 10 District Synods with 3 Provincial Synods. There is a large English work connected with the Society, 20 ministers giving their whole time to Military work and English churches.

The districts occupied include 64 main stations in Bengal, Madras, Mysore, Bombay, Punjab, Central Provinces, Hyderabad (Nizam's Dominions), Trichinopoly and Burma. The European staff numbers 148 with 3,150 Indian workers; Communicants 19,633, and total Christian community 58,253. Organised Churches 93.

Educational work comprises 7 Christian Colleges, students, 3,807; 9 Theological Institutions, pupils, 129; 21 High Schools, pupils, 5,548; 10 Industrial schools, pupils, 602; 1,163 Elementary schools, with 58,460 scholars. In Medical work there are 12 hospitals, 22 dispensaries, 18 qualified doctors, 4,757 in-patient and 285,806 attendances at the dispensaries.

The above particulars are those published for 1915.

Vice-Chairman of General Synod: Rev. D. A. Rees, Bangalore.

The Women's Foreign Missionary Society of the M. E. Mission is divided into 4 Conferences and is co-extensive with the main work of the Mission. 110 Lady Missionaries are engaged in Educational, Zenana, and Evangelistic and Medical work. The Secretary for the Bombay Conference is Miss C. H. Lawson, Talegaon-Dabhada, Poona District.

THE FREE METHODIST MISSION of N. America.—Established at Yeotmal, 1893, operates in Berar with a staff of 16 Missionaries and 16 Indian workers. Organised church 1, Communicants 70; 1 Industrial and 6 Elementary schools, with 175 pupils. *Secretary*: Miss Elizabeth Moreland, Yeotmal, Berar.

ROYAL ARMY TEMPERANCE ASSOCIATION.

In 1862 there was started among the British troops in Agra a small Society, under the leadership of Rev. G. Gregson, Baptist minister, which after a short time took the name of the Soldiers' Total Abstinence Society.

For some ten years the Society struggled with varying success, spreading to other Garrison Stations, but at the end of that time, though it had obtained recognition from the Horse Guards, and was the first Society whose Pledge was so recognised, the membership was not more than 1,200. In the year 1873, however, through the influence of the then Commander-in-Chief, the work was placed on a firmer footing, the Rev. Gelson Gregson gave up his whole time to it, and by accompanying the troops through the Afghan War, making an extended tour through Egypt, and bringing the work into close touch with troops, both *during* peace and war, in the year 1886, when he left the Society, it numbered about 11,000 members. He was followed by a Madras Chaplain, who after two years gave place to the Rev. J. H. Bateson. In 1886, the late Lord Roberts, Commander-in-Chief, organised his Scheme for Regimental Institutes, which have had a wonderful effect on the life of British soldiers in the East; and the Total Abstinence Society was so far incorporated into the scheme as to be allowed ample accommodation, and many practical benefits, in every Unit. At the same time the name was changed to that of the Army Temperance Association, and the work of various societies thus linked together, under one organisation. The effect has been more than even the inaugurator himself ever hoped for. The membership rose steadily from that date and still increases.

Growth of the Society.—In 1889 there were 12,140 members; in 1899, 20,688; in 1909, 30,220, while in 1913-14, the total was 35,000, or over 45 per cent. of the total garrison in India. In 1908, the Secretary having retired after 20 years' work, the Rev. H. C. Martin, M.A., a Chaplain in Bengal, was selected by H. E. Lord Kitchener, to the post of Secretary. Twenty years ago, the Association, which has now for some years been the Royal Army Temperance Association, with the Patronage of King Edward VII, and later of the King Emperor, George V., organised a similar Society in Great Britain, with headquarters in London, from which the troops in South Africa, the Mediterranean, etc., are controlled, so that the whole British Army receives the attention of the Association.

Varied Activities.—What primarily has been the effort of the Association, namely, the decrease of Intemperance, and promotion of sobriety among soldiers has gradually grown into work of every kind, in the interests of soldiers; promotion of sport, occupation of spare time, assistance towards employment in Civil Life, advice and information on the subject of Emigration, provision of Furlough Homes, all tend to enlist the support of officers and men in the Association, and add to its value to them, and to the efficiency of its work, generally. The wonderful change that in late years has taken place in the character of the British Army, in India especially, is due to various causes, including the increased interest in games and sports, the spread of education, the different class of men enlisted, and so on, but the R. A. T. A. has always been given its due share among other causes, by all authorities and Blue Books, and particularly by Officers Commanding Divisions, Brigades and Units. These changes in conduct are seen most plainly in the increased good health of the Army in India.

Effect in the Army.—In the year 1889, 1,174 British soldiers died in India, and 1,800 were invalided unfit for further duty; in 1910, only 330 died, and 484 were invalided. In 1889, 688 underwent treatment for Delirium tremens, in 1910, only 37. In conduct the same difference is to be found; as late as 1901 as many as 545 Courts Martial were held on men for offences due to excessive drinking; in 1906 only 217. In 1904, 2,231 good conduct medals were issued; in 1910, there were 4,581. In regard to the character of the men themselves, who become members of the Association, during their service, we find that in 1912, 59 per cent. on transfer from the Colours obtained Exemplary characters, and 93 per cent. either Exemplary or Very Good; the remainder were for the most part men who, after some years of heavy drinking, had towards the end of their service been persuaded to try and reform themselves, but not soon enough to avoid the consequences of previous excess.

Organisation.—The War has necessarily brought increased work upon this society, the results of which were very quickly apparent. Capacious reception sheds fitted up in the Docks at Bombay and Karachi, proved of the greatest value to troops moving from India, and to the large number coming in: special arrangements aided by a loan from the Government of India, enabled the R. A. T. A. to organise branches in every Territorial unit immediately on arrival, special attention being paid to small detachments and to the Hill stations. In consequence there were, within a month of the completion of the Garrison, over 70 Territorial Branches, containing nearly 50 per cent. of the new arrivals, and this has increased consistently ever

since. In addition to covering all troops from Aden to Singapore, the R. A. T. A. is the only Society working among the Troops of I.E.F. "D", the force in the Persian Gulf. Institutes have been opened and the cordial good will of the authorities enables the R. A. T. A. to provide many amenities to the very trying experiences of this Force. The men relieved, and sent back to India for periodic rest, in addition, receive a warm welcome and entertainment at the hands of the Association. The following is the organisation of the Council and management:—

Patron: His Majesty the King Emperor.

President: His Excellency the Commander-in-Chief.

Council:

The General Officers, Heads of Departments, Army Headquarters.

The General Officers Commanding Divisions.

Two Officers Commanding Regiments.

Officers of the R. A. M. C. and I. M. S.

Two Regimental Quartermasters.

Representatives of the various Churches.

Executive Committee.

Brig.-General T. M. Luke, D.S.O., President.

Lt.-Colonel A. Shairp, C.M.G.

Major A. C. P. Cochran.

Captain F. H. Moody, M.C.

General Secretary: Lt.-Col. G. W. F. Brown.

Auditor: Neison, King and Simson.

Bankers: Bank of Bengal and Alliance Bank of Simla.

Head Office: Talbot House, Simla.

Official Organ: "On Guard," published monthly. (Rs. 3 per annum.)

THE ANGLO-INDIAN TEMPERANCE ASSOCIATION—Founded in 1888 by the late Mr. W. S. Caine, M.P., is a Home Association which has been the means of establishing a net work of Temperance Societies throughout the Indian Empire, and has provided a common platform upon which Christians, Hindus, Mahomedans and Parsis unite for the moral elevation of the Indian peoples. There are 280 Indian Societies affiliated with the Association. The President is Sir J. Herbert Roberts, Bart., M.P. and Secretaries, Sir Bhalchandra Krishna, Kt., L.M. (Bombay), and Mr. John Turner Rae (London). The interests of the Association are especially represented in Parliament by the President, and the Rt. Hon. T. R. Ferens, M.P., Mr. J. Herbert Lewis, M.P., and the Rt. Hon. Sir Thos. Whittaker, M.P., all of whom are members of the Association's Council. The Association publishes a quarterly journal *Abkari*, edited by Mr. Frederick Grubb. Officers—Arkbrook, Home Park Road Wimbledon.

THE ALL-INDIA TEMPERANCE CONFERENCE.—Growing out of the Association mentioned above and in closest relation with it is the All-India Temperance Conference, formed in 1903, which meets every year, as a matter of convenience, at the same time and place as the Indian National Congress, but having no official connection with it. The President is elected annually. The President for 1914 was the Rev. Herbert Anderson. The membership of the Conference is the 280 Indian Temperance Societies affiliated with the Anglo-India Temperance Association as above, from each of which delegates are sent to the Annual Meeting of the Conference. Special Councils embracing Presidency Societies are established at Bombay, Allahabad, Calcutta and Madras, each of which has its own local President, Secretary and Committee. The Bombay Temperance Council was inaugurated in 1897. It consists of delegates elected by about 23 different temperance, religious and philanthropic societies at work in Bombay, Poona, Ahmedabad and Surat, including several of the Christian churches, the International Order of Good Templars, the International Order of Rechabites and the Women's Christian Temperance Union. The medium of communication between the Societies composing the Conference is the *Abkari*, published quarterly from England by the A. I. T. A. Amongst the general aims of the Conference may be mentioned:—

The separation of the licensing from the revenue;

The doing away with the present system of license auctioneering;

The reduction of the present number of liquor shops and the prevention of the formation of new ones in important positions especially in the crowded areas;

The later opening and the earlier closing of liquor shops, and the entire closing of them on public holidays;

The introduction of Temperance Teaching in the Government Elementary Schools and Colleges, which despite the desire of Government expressed in their Circular letter No. 730-37 of 12th Sept. 1907 to "deal with the subject of intemperance in a few sensible lessons in the sanctioned Readers," has not yet been adequately treated and as in the corresponding schools in England.

The general spread of Total Abstinence principles depends more largely upon the individual Societies constituting the Conference than upon the official body. Amongst the methods are lantern addresses, dramatic representations and singing by itinerant preachers. Twelve paid Lecturers travel through various districts holding public meetings and addressing the masses wherever possible. Educational work is especially to the front in the Punjab district through the Amritsar Society.

Warrant of Precedence.

(Brought up to 1 July 1916.)

VICTORIA, by the Grace of God of the United Kingdom of Great Britain and Ireland Queen, Defender of the Faith, Empress of India,—

To all to whom these presents shall come:

WHEREAS it hath been represented unto Us that it is advisable that the rank and precedence of persons holding appointments in the East Indies as regulated by Our Royal Warrant, dated the 18th day of October 1876, should be altered, We do therefore hereby declare that it is Our will and pleasure that in lieu of the table laid down in Our said recited Warrant, the following table be henceforth observed with respect to the rank and precedence of the persons hereinafter named, *viz.*:—

1. Governor-General and Viceroy of India.
2. Governors of Madras and Bombay.
3. President of the Council of the Governor-General.
4. Lieutenant-Governor when in his own territories.
5. Commander-in-Chief in India.
6. Lieutenant-Governor.
7. Chief Justice of Bengal.
8. Bishop of Calcutta, Metropolitan of India.
9. Ordinary Members of the Council of the Governor-General.
10. Commander-in-Chief of Her Majesty's Naval Forces in the East Indies.
11. Chief Justice of a High Court other than that of Bengal.
12. Bishops of Madras and Bombay.
13. Ordinary Members of Council in Madras and Bombay.
14. Lieut.-Generals Commanding the Forces, Punjab, Bengal, Madras and Bombay.
15. Chief Commissioners of the Central Provinces and Assam, Residents at Hyderabad and in Mysore, and Agents to the Governor-General in Rajputana, Central India, and Baluchistan.
16. Puisne Judges of a High Court.
17. Chief Judge of a Chief Court.
18. Military Officers above the rank of Major-General.
19. Comptroller and Auditor-General.
20. Additional Members of the Council of the Governor-General for making Laws and Regulations.
21. Bishops of Lahore, Rangoon, and Lucknow.
22. Secretaries to the Government of India.
23. Commissioner in Sind.
24. Judges of a Chief Court, Recorder of Rangoon and Judicial Commissioners, Burma.
25. Chief Secretaries to the Governments of Madras and Bombay.
26. Major-Generals, Members of a Board of Revenue, Commissioners of Revenue and Customs, Bombay; Financial Commissioners, Punjab and Burma.
27. Judicial Commissioners, including Additional Judicial Commissioners of Oudh, the Central Provinces, and Sind.
28. Additional Members of the Councils of the Governors of Madras, and Bombay for making Laws and Regulations, Members of the Legislative Council of a Lieutenant-Governor.
29. Vice-Chancellors of Indian Universities.

FIRST CLASS.

30. Members of the Indian Civil Service of 30 years' standing.
31. Advocate-General, Calcutta.
32. Commissioners of Divisions, the Superintendent of Port Blair, and Residents, Political Agents, and Superintendents drawing Rs 2,000 a month and upwards (not being Collectors or Deputy Commissioners of British Districts), within their respective charges.
33. Chief Secretaries to Local Governments other than those of Madras and Bombay.
34. Surveyor-General of India, Directors-General of the Post Office, of Telegraphs in India and of Railways, Chief Engineers, first class, Accountants-General, Military and Public Works Departments, Director, Royal Indian Marine and Manager, North-Western Railway.
35. Bishops (not territorial) under license from the Crown.
36. Archdeacons of Calcutta, Madras and Bombay.
37. Brigadiers-General.
38. Commissioners of Divisions.
39. Commissioner of Northern India, Salt Revenue, and Opium Agents, Benares and Bihar.
40. Secretaries and Joint Secretaries to Local Governments, and Private Secretary to the Viceroy.

SECOND CLASS.

41. Members of the Indian Civil Service of 23 years' standing and Colonels.
42. Military Secretary to the Viceroy.
43. Judicial Commissioners of the Hyderabad Assigned Districts and Baluchistan; the Superintendent of Port Blair; Residents, Political Agents, and Superintendents drawing Rs. 2,000 a month and upwards (not being Collectors or Deputy Commissioners of British Districts).
44. Inspector-General of Forests in India, and Director of the Geological Survey.
45. Standing Counsel to the Government of India.
46. Directors of Public Instruction, and Inspectors-General of Police and Prisons under Local Governments, and Accountants-General.
47. Survey Commissioner and Director of Land Records and Agriculture, Bombay; Commissioners of Settlements; and Controllers of Military Accounts.
48. Chief or Senior Civil Secretary to a Local Administration.

49. Chief Engineers, second and third classes; Deputy Surveyor-General; Deputy Director-General of Telegraphs in India, and Director-in-Chief, Indo-European Telegraph Department.

50. Divisional, and District and Sessions Judges, Collectors and Magistrates of Districts; Deputy Commissioners of Districts; Deputy Superintendent of Port Blair; and the Chief Officer of each Presidency Municipality; within their respective charges.

51. Archdeacons of Lahore, Lucknow, and Rangoon.

52. Deputy Secretaries to the Government of India.

53. The Senior Chaplains of the Church of Scotland in Bengal, Madras, and Bombay.

54. Remembrancers of Legal Affairs and Government Advocates under Local Governments.

55. Officers in the First Class Graded List of Civil Offices not reserved for Members of the Indian Civil Service.

56. Members of the Indian Civil Service of 18 years' standing and Lieutenant-Colonels.

57. The Deputy Director, Royal Indian Marine.

58. The Assistant Director, Royal Indian Marine.

59. Commanders and Inspectors of Machinery, Royal Indian Marine.

THIRD CLASS.

60. Political Agents and Superintendents drawing less than Rs. 2,000 a month (not being Collectors or Deputy Commissioners of British Districts) within their own charges.

61. Secretaries to Local Administrations other than those already specified.

62. Consulting Engineers to the Government for India and Railways.

63. Private Secretaries to Governors.

64. Military Secretaries to Governors.

65. Administrators-General.

66. Sanitary Commissioners under Local Governments; Postmasters-General; the Comptroller, Post Office; and Conservators of Forests, first grade.

67. Directors of Public Instruction, Inspectors-General of Police and Prisons under Local Administrations, and Comptrollers and Deputy Auditors-General.

68. Managers of State Railways other than the North-Western Railway; Chairman of the Port Trust, Bombay, and Chairman of the Port Trust, Calcutta.

69. Vice-Chairman of the Port Trust, Calcutta; Directors of Traffic and Construction, Indian Telegraph Department; Examiners of Accounts, Public Works Department, first class; Officers of the Superior Revenue Establishment of State Railways, first class, first grade; Superintending Engineers, Public Works Department, first class; Superintendents of the Survey of India Department, first grade.

70. Inspectors-General of Registration and Directors of Land Records and Agriculture, under Local Governments.

71. Senior Chaplains other than those already specified.

72. Sheriffs within their own charges.

73. Officers in the Second Class Graded List of Civil Offices not reserved for Members of the Indian Civil Service.

FOURTH CLASS.

74. Members of the Indian Civil Service of 12 years' standing, and Majors.

75. Lieutenants of over 8 years' standing, and Chief Engineers of the Royal Indian Marine.

76. Government Solicitors.

77. Inspectors-General of Registration, Sanitary Commissioners, and Directors of Land Records and Agriculture under Local Administrations.

78. Officers in the Third Class Graded List of Civil Offices not reserved for Members of the Indian Civil Service.

The entries in the above table apply exclusively to the persons entered therein, and, while regulating their relative precedence with each other, do not apply to the non-official community resident in India, the members of which shall take their place according to usage.

Officers in the above table will take precedence in order of the numbers of the entries. Those included in one number will take precedence *inter se* according to the date of entry into that number.

When an officer holds more than one position in the table, he will be entitled to the highest position accorded to him.

Officers who are temporarily officiating in any number in the table will rank in that number below permanent incumbents.

All officers not mentioned in the above table, whose rank is regulated by comparison with rank in the army, to have the same rank with reference to civil servants as is enjoyed by Military Officers of equal grades.

All other persons who may not be mentioned in this table, to take rank according to general usage, which is to be explained and determined by the Governor-General in Council in case any question shall arise.

Nothing in the foregoing Rules to *disturb the* existing practice relating to precedence at Native Courts, or on occasions of intercourse with Natives, and the Governor-General in Council to be empowered to make rules for such occasions in case any dispute shall arise.

All ladies to take place according to the rank herein assigned to their respective husbands, with the exception of wives of Peers, and of ladies having precedence in England independently of their husbands, and who are not in rank below the daughters of Barons, such ladies to take place according to their several ranks, with reference to such precedence in England, immediately after the wives of Members of the Council of the Governor-General.

Given at Our Court at Windsor this tenth day of December, in the year of Our Lord One thousand eight hundred and ninety-eight, and in the sixty-second year of Our Reign.

By Her Majesty's Command.

(Signed) GEORGE HAMILTON.

Supplementary Graded List of Civil Offices not Reserved for Members of the Indian Civil Service prepared under the orders of the Governor-General in Council.

*FIRST CLASS—(No. 55 of the Warrant).

Assay Master of the Mint, Calcutta and Bombay.

Chief Judges of Presidency Courts of Small Causes.

Commissioners of Police, Calcutta, Madras, Bombay, and Rangoon.

Controller of Printing and Stationery.

Deputy Comptroller-General.

Director-General of Archæology.

Director of the Botanical Survey of India.

Director, Zoological Survey of India.

Inspector-General of Agriculture in India.

Masters of the Mint, Calcutta and Bombay.

Meteorological Reporter to the Government of India.

Superintendent of Revenue Survey, Madras.

Superintendent, Trigonometrical Surveys.

*SECOND CLASS—(No. 73 of the Warrant).

Actuary to the Government of India.

Adviser on Chinese Affairs in Burma.

Agent General in India for the British Protectorates in Africa under the Administration of the Foreign Office.

Chief Collector of Customs, Burma.

Chief Constructor of the Royal Indian Marine Dockyard at Bombay.

Chief Inspector of Mines in India.

Chief Presidency Magistrates.

Chief Superintendents of the Telegraph Department.

Collector of Customs and Salt Revenue, Sind.

Collectors and Magistrates of Districts; and Deputy Commissioners of Districts and of Settlements.

Conservators of Forests, 2nd and 3rd Grades.

Consulting Surveyor to the Government of Bombay.

Deputy Accountants-General under Local Governments.

Deputy Directors of Telegraphs.

Deputy Inspectors-General of Police.

Deputy Superintendent of Port Blair.

Directors of the Persian Gulf Section, and of the Persian Section of the Indo-European Telegraph Department.

Directors of Telegraphs, 2nd, 3rd and 4th Classes.

Director of Statistics.

Divisional and District and Sessions Judges.

Emigration Agent at Madras.

Examiners of Accounts, Public Works Department, 2nd and 3rd Classes.

Government Astronomer, Madras.

Government Emigration Agents at Calcutta for British Guiana and Natal, and for Trinidad, Fiji, Jamaica, and Mauritius.

Imperial Bacteriologist.

Inspector of Mines to the Government of India.

Librarian, Imperial Library.

Principal of the Mayo College at Ajmer.

Principal of the Rajkumar College at Rajkot.

Officers in charge of the Records of the Government of India.

Officers of the Indian Educational Service, and of the graded Educational Service drawing Rs. 1,250 a month and upwards.

Officers of the Superior Revenue Establishment of State Railways, 1st Class, 2nd and 3rd Grades.

Reporter on Economic Products.

Superintendent of the Royal Botanica Gardens, Calcutta.

Superintendents, Geological Survey of India.

Superintendents of Revenue Survey and Assessment, Bombay.

Superintendents of the Survey of India Department, 2nd Grade.

Superintending Engineers, Public Works Department, 2nd and 3rd Classes.

Under Secretaries to the Government of India.

*THIRD CLASS—(No. 78 of the Warrant).

Agricultural Chemist.

Assistant Directors of Dairy Farms.

Assistant Inspector-General of Forests.

Assistant Secretaries to the Government of India.

Chief Chemical Examiner, Central Chemical Laboratory, Nainital.

Collector of Stamp Revenue, Superintendent of Excise Revenue, and Deputy Collector of Land Revenue, Calcutta.

Commander of the steamer employed in the Persian Gulf Section of the Indo-European Telegraph Department.

Constructors of the Royal Indian Marine Dockyards at Bombay and Kidderpore.

Deputy Administrator-General, Bengal.

Deputy Collector of Salt Revenue, Bombay.

Deputy Commissioner of Northern India, Salt Revenue.

Deputy Commissioners of Police, Calcutta and Bombay.

Deputy Commissioners of Salt, Abkari and Customs Department, Madras.

Deputy Conservators of Forests drawing Rs. 800 a month and upwards.

Deputy Directors of Land Records and Agriculture, Madras and Burma.

* The entries in each class are arranged in alphabetical order.

Deputy Director of the Imperial Forest School, Dehra Dun.

Deputy Directors of Revenue Settlements and Deputy Superintendents of Revenue Surveys, Madras.

Deputy Postmasters-General of the 1st, 2nd and 3rd grades.

Deputy Superintendents, Geological Survey of India.

Deputy Superintendents, Survey of India Department.

District Superintendents of Police drawing Rs. 800 a month and upwards.

Engineer and Electrician of the Persian Gulf Section of the Indo-European Telegraph Department.

Examiners of Accounts, Public Works Department, 4th class, 1st and 2nd grades.

Executive Engineers, Public Works Department, 1st and 2nd Grades.

Inspector-General of Railway Mail Service.

Judge of the City Civil Court, Madras.

Judges of Presidency Courts of Small Causes, and First Judge of the Small Cause Court, Rangoon.

Manager of the Cordite Factory, Aruvankadu.

Officers of the Indian Educational Service and of the graded Educational Service, drawing less than Rs. 1,250 a month, but more than Rs. 1,000 a month.

Officers of the Superior Revenue Establishments of the State Railways, Second Class 1st and 2nd Grades.

Palæontologist, Geological Survey of India.

Presidency Magistrates.

Protector of Emigrants and Superintendent of Emigration, Calcutta.

Public Prosecutor in Sind.

Registrars to the High Courts and to the Chief Court, Punjab.

Sub-Deputy Opium Agents drawing Rs. 800 a month and upwards.

Superintendent of the Indian Museum.

Superintendent of Land Records and Agriculture in Sind.

Superintendents of Stamps and Stationery.

Superintendents, Telegraph Department, 1st and 2nd Grades.

Under the orders of Her Majesty's Secretary of State for India, the following table showing the relative rank of officers in the Army, Royal Navy, and Royal Indian Marine is attached to the Warrant of Precedence for India, published with Home Department Notification No. 328, dated the 10th February 1899:—

Lieut.-Colonels	Captains under 3 years and officers of corresponding rank, Royal Navy. Deputy Director, Royal Indian Marine. Assistant Director, Royal Indian Marine. Commanders, Royal Navy. Commanders, Royal Indian Marine. Staff Commanders and officers of corresponding rank, Royal Navy. Inspectors of Machinery, Royal Indian Marine. Chief Engineers, Royal Indian Marine.	*But Junior to all Lieut. Colonels.*
Majors	Lieutenants of 8 years' seniority and officers of corresponding rank, Royal Navy. Lieutenants, Royal Indian Marine, over 8 years' seniority. Engineers' Royal Indian Marine, of and over 9 years' seniority.	*But Junior to all Majors.*
Captains	Lieutenants under 8 years and officers of corresponding rank, Royal Navy. Lieutenants, Royal Indian Marine, under 8 years' seniority. Engineers, Royal Indian Marine, under 9 years' seniority.	*But Junior to all Army Captains.*
Lieutenants	Sub-Lieutenants and officers of corresponding rank, Royal Navy. Sub-Lieutenants, Royal Indian Marine. Assistant Engineers, Royal Indian Marine.	*But Junior to all Lieutenants.*

SALUTES.

The following is the official table of salutes in Indian Territories—a term which includes all the waters of India within three miles of the coast. "Indian seas," within which some of the salutes are to be given, extend from the North-West entrance of the Straits of Malacca to Cape Comorin, excepting Ceylon, and from Cape Comorin to Aden, including the Maldive and Laccadive Islands, and the Persian Gulf.

Persons.	No. of Guns.
Imperial Salute	101
The King and Emperor when present in person	101
Members of the Royal Family	31
Royal Standard and Royal Salute	31
Viceroy and Governor-General in India.	31
Independent Asiatic Sovereigns	21
Other Foreign Sovereigns	21
Members of their Families and their Standards	21
Ambassadors	19
Governors of Presidencies	17
The President of the Council of India	17
Governor-General of Portuguese Settlements in India	17
Governor of Pondicherry	17
Governors of His Majesty's Colonies	17
Lieutenant-Governors of Provinces in India	15
Commander-in-Chief in India (If a Field Marshal)	19
Commander-in-Chief in India (If a General)	17
Commander-in-Chief of His Majesty's Naval Forces	
Generals and Admirals, or their Flags	15
Members of the Viceroy's Council	15
Plenipotentiaries and Envoys	15
Lieut.-Governors of His Majesty's Colonies	15
Vice-Admirals, Lieut.-Generals, or their Flags	13
Agents to the Viceroy and Governor-General	13
Agent to the Governor of Bombay in Kathiawar	13
Residents	13
Chief Commissioners of Provinces, and Commissioner of Sind	13
Members of the Executive Council of a Local Government	13
Rear-Admirals & Major-Generals, or their Flags	11
Political Agents and Charges d'Affaires	11
Commodores of the first-class, and Brigadier-Generals	9
The Portuguese Governor of Damaun	9
The Governor of Diu	9
Return salutes to Foreign Men-of-war	
Return salutes to Captains of the Navy, and Naval Officers of inferior rank	1

Salutes to Chiefs.

Salutes of 21 *guns.*

Baroda. The Maharaja (Gaekwar) of.
Hyderabad. The Nizam of.
Mysore. The Maharaja of.

Salutes of 19 *guns.*

Bhopal. The Begam (or Nawab) of.
Gwalior. The Maharaja (Sindhia) of.
Indore. The Maharaja (Holkar) of.
Jammu and Kashmir. The Maharaja of.
Kalat. The Khan (Wali) of.
Kolhapur. The Maharaja of.
Mewar (Udaipur). The Maharana of.
Travancore. The Maharaja of.

Salutes of 17 *guns.*

Bahawalpur. The Nawab of.
Bharatpur. The Maharaja of.
Bikaner. The Maharaja of.
Bundi. The Maharao Raja of.
Cochin. The Raja of.
Cutch. The Rao of.
Jaipur. TheMaharaja of.
Karauli. The Maharaja of.
Kotah. The Maharao of.
Marwar (Jodhpur). The Maharaja of.
Patiala. The Maharaja of.
Rewa. The Maharaja of.
Sirohi. The Maharajadhiraja of.
Tonk. The Nawab of.

Salutes of 15 *guns.*

Alwar. The Maharaja of.
Banswara. The Maharawal of.
Bhutan. The Maharaja of.
Datia. The Maharaja of.
Dewas (Senior Branch). The Raja of.
Dewas (Junior Branch). The Raja of.
Dhar. The Raja of.
Dholpur. The Maharaj Rana of.
Dungarpur. The Maharawal of.
Idar. The Maharaja of.
Jaisalmer. The Maharawal of.
Khairpur. The Mir of.
Kishangarh. The Maharaja of.
Orchha. The Maharaja of.
Partabgarh. The Maharawat of.
Sikkim. The Maharaja of.
Sirohi. The Maharao of.

Salutes of 13 *guns.*

Benares. The Raja of.
Cooch Behar. The Maharaja of.
Jaora. The Nawab of.
Rampur. The Nawab of.
Tippera. The Raja of.

Salutes of 11 *guns.*

Aga Khan, His Highness the.
Ajaigarh. The Maharaja of.
Baoni. The Nawab of.
Bhavnagar. The Thakur Sahib of.
Bijawar. The Maharaja of.
Cambay. The Nawab of.
Chamba. The Raja of.
Charkhari. The Maharaja of.
Chhatarpur. The Raja of.
Dhrangadhra. The Maharajah of.
Faridkot. The Raja of.
Gondal. The Thakur Sahib of.
Janjira. The Nawab of.
Jhabua. The Raja of.
Jhalawar. The Raj-Rana of.
Jind. The Maharaja of.
Junagadh (or Junagarh). The Nawab of.
Kahlur (Bilaspur). The Raja of.
Kapurthala. The Maharaja of.
Mandi. The Raja of.
Manipur. The Raja of.
Morvi. The Thakur Sahib of.

Nabha. The Maharaja of.
Narsinghgarh. The Raja of.
Navanagar (or Nawanagar). The Maharajah of.
Palanpur. The Diwan of.
Panna. The Maharaja of.
Porbandar. The Maharana of.
Pudukkottai (or Puddukottai). The Raja of.
Radhanpur. The Nawab of.
Rajgarh. The Raja of.
Rajpipla. The Raja of.
Ratlam. The Raja of.
Sailana. The Raja of.
Samthar. The Raja of.
Sirmur (Nahan). The Raja of.
Sitamau. The Raja of.
Suket. The Raja of.
Tehri (Garhwal). The Raja of.

Salutes of 9 *guns.*

Ali Rajpur. The Raja of.
Balasinor (or Vadasinor). The Nawab (Babi) of.
Bansda. The Raja of.
Baraundha. The Raja of.
Bariya. The Raja of.
Barwani. The Rana of.
Chhota Udepur (or Mahun). The Raja of.
Dharampur. The Raja of.
Dhrol. The Thakur Sahib of.
Fadthli (Shukra). The Sultan of.
Hsipaw (or Thibaw). The Sawbwa of.
Karond (Kalahandi). The Raja of.
Kengtung (or Kyaington). The Sawbwa of.
Khilchipur. The Rao of.
Kishn and Socotra. The Sultan of.
Lahej (or Al Hauta). The Sultan of.
Limri. The Thakur Sahib of.
Lunawara (or Lunavada). The Raja of.
Maihar. The Raja of.
Maler Kotla. The Nawab of.
Möng Nai. The Sawbwa of.
Nagod. The Raja of.
Palitana. The Thakur Sahib of.
Rajkot. The Thakur Sahib of.
Sachin. The Nawab of.
Savantvadi. The Sar Desai of.
Shehr and Mokalla. The Sultan of.
Sunth. The Raja of.
Vankaner (or Wankaner). The Raj Sahib of.
Wadhwan (or Vadwan). The Thakur Sahib of.
Yawnghwe (or Nyaungywe). The Sawbwa of.

Personal Salutes.

Salutes of 21 *guns.*

Gwalior. Honorary Major-General His Highness Maharaja Sir Madho Rao Sindhia Bahadur, G.C.S.I., G.C.V.O., A.D.C., LL.D., Maharaja of.
Jaipur. Honorary Major-General His Highness Maharajadhiraja Sir Sawai Madho Singh Bahadur, G.C.S.I., G.C.I.E., G.C.V.O., LL.D., Maharaja of.
Kolhapur. His Highness Sir Shahu Chhatrapati Maharaj, G.C.S.I., G.C.I.E., G.C.V.O., LL.D., Maharaja of.
Mewar (Udaipur). His Highness Maharajadhiraja Maharana Sir Fateh Singh Bahadur, G.C.S.I., G.C.I.E., Maharana of.
Travancore. His Highness Sri Maharaja Raja Sir Bala Rama Varma Bahadur, G.C.S.I., G.C.I.E., Maharaja of.

Salutes of 19 *guns.*

Cochin. His Highness Raja Sree Sir Ram Varmah, G.C.S.I., G.C.I.E., Raja of.
Mysore. Her Highness Maharani Kempa Nanjammani Avaru Vanivilas, C.I., of.
Nepal. Honorary Major-General His Excellency Maharaja Sir Chandra Shumshere Jung, Bahadur Rana, G.C.B., G.C.S.I., G.C.V.O. D.C.L., Prime Minister, Marshal of.

Salutes of 17 *guns.*

Jodhpur. Honorary Major-General His Highness Maharaja Bahadur Sir Pratab Singh, G.C.S.I., G.C.V.O., K.C.B., A.D.C., Regent of.
Orchha. His Highness Maharaja Mahindra Sawai Sir Partap Singh Bahadur, G.C.S.I., G.C.I.E., Maharaja of.

Salute of 13 *guns.*

Palanpur. His Highness Nawab Sir Sher Muhammad Khan Zorawar Khan, G.C.I.E., Diwan of.

Salutes of 11 *guns.*

Barwani. His Highness Rana Ranjit Singh of.
Bhor. His Highness Shankar Rav Chimnaji, Pant Sachiv of.
Lahej (or Al Hauta). His Highness Abdul Karim-bin-Fadthl-bin Ali.
Maler Kotla. His Highness Ahmud Ali Khan Bahadur, Nawab of.
Shehr and Mokalla. His Highness Sultan Ghalib-bin-Awadth Al-Kayti, Sultan of.

Salutes of 9 *guns.*

Danta, Shri Hamirssinhji Jaswatsinhji, Maharana of.
Kanker. Maharajadhiraja Komal Deo, of.
Las Bela. Mir Kamal Khan, Jam of.
Loharu. Nawab Sir Amir-ud-din Ahmad Khan Bahadur, K.C.I.E., of.
Mudhol. Meherban Malojirao Vyankatrav Raje Ghorpade, *alias* Nana Saheb, of.
Dthala Amir Nasr Shaif, of.

Local Salutes.

Salutes of 21 *guns.*

Bhopal. The Begam (or Nawab) of.
Gwalior. The Maharaja (Sindhia) of.
Indore. The Maharaja (Holkar) of.
Jammu and Kashmir. The Maharaja of.

Salutes of 5 *guns.*

The Sheikh of Koweit.
The Sheikh of Bahrein.
The Sheikh of Abu Thabi.

Salutes of 3 *guns.*

The Sheikh of Debai.
The Sheikh of Shargah.
The Sheikh of Ajman.
The Sheikh of Um-el-Kawain.
The Sheikh of Ras-al-Kheima.

Local Personal Salutes.

These are fired on the termination of an official visit.

Salute of 13 *guns.*

His Excellency the Govr. of Bushire.

Salutes of 12 *guns.*

The Sheikh of Mohammerah.
The Sheikh of Koweit.

Salute of 11 *guns.*

The Sheikh of Bahrein.

Salutes of 5 *guns.*

Eldest son of the Sheikh of Mohammerah.
Eldest son of the Sheikh of Koweit.

Salutes of 5 *guns.*

The Govr. of Mohammerah.
The Govr. of Bunder Abbas.
The Govr. of Lingah.

Salute of 3 *guns.*

Eldest son of the Sheikh of Bahrein.

SALARIES OF CHIEF OFFICERS.

The following are the tables of salaries sanctioned for the Chief Officers of the Administration of India. The tables are liable to variation, and it should be noted that the pay of members of the Indian Civil Service is subject to a deduction of 4 per cent. for subscription towards annuity;—

	Pay per Annum Rs.
Viceroy and Governor-General	2,50,800
Private Secretary to Viceroy	24,000
Military Secretary and Aide-de-Camp to Viceroy	18,000
Surgeon to Viceroy	14,400
Commander-in-Chief of the Forces in India	1,00,000
Military Secretary to Commander-in-Chief in India	18,000
Members (6) of the Governor-General's Council	80,000
President, Railway Board	60,000 or 72,000
Member, Railway Board	48,000
Secretaries to the Government of India in the Army and Public Works and Legislative Departments	42,000
Secretaries to the Government of India in the Finance, Foreign, Home, Revenue and Agriculture, Commerce and Industry and Education Departments	48,000
Educational Commissioner	30,000 to 36,000
Comptroller and Auditor-General	54,000
Controller of Currency	36,000 to 42,000
2 Accountants-General, Class I	33,000
3 " " II	30,000
4 " " III	27,000
1 Commissioner of Northern India Salt Revenue	30,000
1 Director-General of Posts and Telegraphs	42,000 to 48,000
2 Postmasters-General	30,000
2 Postmasters-General	27,000
3 " "	24,000
4 " "	21,000
1 Director, Geological Survey of India	24,000
Deputy Secretaries to the Government of India in the Finance and Foreign Departments	27,000
Deputy Secretaries to the Government of India in the Legislative and Home Departments	24,000
Superintendent of Port Blair	30,000 to 36,000
1 Chief Commissioner of Delhi	36,000
1 Director, Criminal Intelligence	36,000
1 Deputy Director, Criminal Intelligence	18,000 to 24,000
Inspector-General of Forests	31,800
Surveyor-General, Survey of India	36,000
1 Chief Inspector of Mines in India	21,000 to 24,200
1 Director-General, Indian Medical Service	36,000
1 Sanitary Commissioner with the Government of India	24,000 to 30,000
1 Director-General of Archæology in India	20,400
1 Administrator-General of Bengal	24,000
1 Director-General of Commercial Intelligence	24,000
1 " " Indian Observatories	18,000 to 24,000
Controller of Stationery and Printing	18,000 to 27,000
Governors of Madras, Bombay, and Bengal	1,20,000
Private Secretaries to Governors of Madras, Bombay, and Bengal	18,000
Surgeons to Governors of Madras, Bombay, and Bengal	12,000
Military Secretary and Aide-de-Camp to Governors of Madras, Bombay, and Bengal	12,000
Bishop of Calcutta	45,977
Bishop of Madras	25,600
Bishop of Bombay	25,600
Chief Justice of Bengal	72,000
Chief Justices of Madras, Bombay, and the North-Western Provinces	60,000
Puisne Judges of the High Courts of Calcutta (15), Madras (6), Bombay (6), and the North-Western Provinces (6)	48,000
Chief Judge of the Chief Court, Punjab	48,000
" " " Burma	48,000
Judges of the Chief Court, Punjab (4), and Burma (4), except Chief Judges	42,000
6 Political Residents, 1st class	48,000
9 " " 2nd class	33,000
Political Officers on time scale	5,400 to 28,800

Provincial Salaries.

N.B.—Acting and other allowances are not included in the salaries shown.

		Pay per Annum. Rs.
	Bengal.	
3	Members of Council	64,000
1	Member of the Board of Revenue	45,000
5	Commissioners of Divisions	35,000
1	Chief Secretary to Government	45,000
3	Secretaries to Government	33,000
3	Under Secretaries to Government	12,000
1	Excise Commissioner	21,600
1	Chairman of Corporation of Calcutta	30,000
1	Deputy ditto	12,000 to 18,000
1	Collector of Customs, Calcutta	30,000
12	Magistrates and Collectors, 1st grade	27,000
13	" " 2nd "	21,600
14	" " 3rd "	18,000
17	Joint Magistrates and Deputy Collectors, 1st grade	10,800
17	" " " 2nd "	8,400
	—Assistant Magistrates and Collectors	4,800 to 6,000
3	District and Sessions Judges, 1st grade	36,000
13	" " " 2nd "	30,000
21	" " " 3rd "	24,000
1	Chief Judge, Presidency Courts of Small Causes	24,000 to 30,000
4	Judges " " " "	12,000, 13,500 and 15,600 16,800
1	Advocate General	48,000
1	Solicitor to Government	60,000
1	Registrar, High Court	20,400
1	Inspector-General of Police	30,000 to 36,000
1	Director of Public Instruction	24,000 to 30,000
1	Private Secretary to H. E. The Governor	18,000
1	Director of Agriculture	27,000
1	Director of Land Record	18,000
1	Secretary of the Board of Revenue	18,000
	Bihar and Orissa.	
1	Lieutenant Governor	1,00,000
3	Members of the Executive Council	60,000
1	Member of the Board of Revenue	42,000
1	Chief Secretary to Government	36,000
2	Secretaries to Government	27,000
3	Under Secretaries to Government	12,000
5	Commissioners	35,000
10	Magistrates and Collectors, 1st grade	27,000
11	" " 2nd "	21,600
12	" " 3rd "	18,000
11	Joint Magistrates and Deputy Collectors, 1st grade	10,800
10	" " " 2nd "	8,400
	—Assistant Magistrates and Collectors	4,800 to 6,000
2	District and Sessions Judges, 1st grade	36,000
5	" " 2nd "	30,000
6	" " 3rd "	24,000
1	Commissioner of Excise and Salt	17,280
1	Director of Land Records and Surveys	21,600
1	Director of Agriculture	18,000
1	Inspector-General of Police	30,000 to 36,000
1	Director of Public Instruction	24,000

	Pay per Annum. Rs.
Assam.	
1 Chief Commissioner	56,000
2 Commissioners	33,000
2 Secretaries to Chief Commissioner	18,000 and 21,600
6 Deputy Commissioners, 1st grade	27,000
7 „ „ 2nd „	21,600
7 „ „ 3rd „	18,000
4 Assistant „ 1st „	10,800
4 „ „ 2nd „	8,400
— „ „ 3rd „	5,400 — 6,000
2 Under Secretaries to Chief Commissioner	12,000
1 District and Sessions Judge	30,000
1 Inspector-General of Police	27,000
1 Director of Public Instruction	15,000 to 18,000
1 Director of Land Records and Agriculture	18,000
1 Excise Commissioner	18,000
United Provinces of Agra and Oudh.	
1 Lieutenant Governor	1,00,000
1 Chief Secretary to Government	36,000
2 Members of the Board of Revenue	42,000
2 Secretaries to Government	20,000 and 22,000
1 Secretary to Board of Revenue	22,000
3 Under Secretaries to Government	12,000
9 Commissioners of Divisions	35,000
1 Commissioner for Kumaon	30,000
1 Opium Agent	30,000 to 36,000
19 Magistrates and Collectors, 1st grade	27,000
17 „ „ 2nd „	22,000
4 Deputy Commissioners, 1st grade	22,000
16 „ „ 2nd „	20,000
15 Joint Magistrates, 1st grade	12,000
8 Assistant Commissioners, 1st grade	9,600
21 Joint Magistrates and Assistant Commissioners, 2nd grade	8,400
— Assistant „ „ „	4,800 to 6,000
3 Deputy Commissioners for Kumaon	12,000, 12,000 and 18,000
1 City Magistrate, Lucknow	12,000
1 Superintendent, Dehra Dun	18,000
1 Judicial Commissioner	42,000
2 Additional Judicial Commissioners	40,000
2 District and Sessions Judges, 1st grade	36,000
7 „ „ 2nd „	30,000
7 „ „ 3rd „	27,000
10 „ „ 4th „	22,000
5 „ „ 5th „	20,000
1 Registrar, High Court	19,200
1 Inspector-General of Police	30,000 to 36,000
1 Director of Public Instruction	24,000
Punjab.	
1 Lieutenant Governor	1,00,000
1 Chief Secretary to Government	36,000
2 Secretaries to Government	18,000 and 21,600
2 Under Secretaries to Government	12,000
1 Under Secretary, Police Department, and Inspector-General of Police	30,000
1 Under Secretary, Educational Department	24,000
2 Financial Commissioners	42,000
2 Secretaries to Financial Commissioner	10,800 and 8,400
5 Commissioners	33,000

		Pay per Annum. Rs.
	Punjab—*contd.*	
14	Deputy Commissioners, 1st grade	27,000
14	„ „ 2nd „	21,600
14	„ „ 3rd „	18,000
14	Assistant Commissioners, 1st grade	10,800
14	„ „ 2nd „	8,400
39	„ „ 3rd „	6,000
2	Divisional Judges, 1st grade	33,000
4	„ „ 2nd „	30,000
6	„ „ 3rd „	27,000
10	„ „ 4th „	21,600
10	District Judges	18,000
1	Sub-Judge and Judge, Small Cause Court, Simla	15,000
1	Registrar of the Chief Court	15,000
1	Legal Remembrancer	24,000
1	Inspector-General of Police	24,000
1	Director of Public Instruction	24,000
	Burma.	
1	Lieutenant Governor	1,00,000
1	Chief Secretary to Government	36,000
2	Secretaries „	21,600
2	Under Secretaries	6,000
1	Assistant Secretary	6,000
1	Financial Commissioner	42,000
1	Settlement Commissioner and Director of Land Records	33,000
1	Deputy Director of Land Records	19,200
1	Secretary to Financial Commissioner	12,000
1	Director of Agriculture	21,600
8	Commissioners of Divisions	33,000
12	Deputy Commissioners, 1st grade	27,000
14	„ „ 2nd „	21,600
15	„ „ 3rd „	18,000
12	Assistant „ 1st „	12,000
13	„ „ 2nd „	8,400
10	„ „ 3rd „	7,200
52	„ „ 4th „	5,400 to 6,000
1	Judicial Commissioner	42,000
2	Divisional Judges, 1st grade	33,000
1	„ „ 2nd „	30,000
2	„ „ 3rd „	27,000
2	„ „ 4th „	21,600
8	District „	18,000
1	Registrar, Chief Court, Lower Burma	8,400
1	Government Advocate	18,000 to 21,600
	Central Provinces.	
1	Chief Commissioner	62,000
1	Financial Commissioner	42,000
5	Commissioners of Divisions	33,000
13	Deputy Commissioners, 1st class	27,000
13	„ „ 2nd „	21,600
14	„ „ 3rd „	18,000
10	Assistant „ 1st „	10,800
10	„ „ 2nd „	8,400
–	„ „ 3rd „	4,800 to 6,000
1	Judicial Commissioner	42,000
2	Additional Judicial Commissioners	36,000
4	Divisional and Sessions Judges	14,800 to 18,240
2	District and Sessions Judges	14,800 and 20,400
1	Inspector-General of Police	27,000 to 33,000
1	Director of Public Instruction	18,000 to 24,000

		Pay per Annum. Rs.
	Madras.	
2	Members of Council	64,000
1	First Member, Board of Revenue	45,000
1	Second Member "	42,000
1	Third Member "	36,000
1	Fourth Member "	36,000
1	Chief Secretary to Government	45,000
1	Revenue Secretary to Government	36,000
1	Secretary to Government	30,000
1	Private Secretary to Governor	18,000
2	Under Secretaries to Government	12,000
1	Secretary to Commissioners of Land Revenues	18,000 to 21,600
1	Secretary to the Commissioners of Salt, &c.	18,000 to 21,600
22	District and Sessions Judges	24,000 to 36,000
1	Registrar, High Court	18,000 to 21,600
1	Advocate General	21,600
1	Government Solicitor	13,200
1	Chief Judge, Small Cause Court	24,000
1	Commissioner of Coorg	21,600 to 24,000
1	Resident in Travancore and Cochin	33,600
1	Inspector-General of Police	30,000 to 36,000
9	Collectors, 1st grade	30,000
14	" 2nd "	27,000
1	President, Corporation of Madras	20,820
6	Collectors, 3rd grade	21,600
7	Sub-Collectors and Joint Magistrates, 1st grade	14,400
16	" " " 2nd "	10,800
16	" " " 3rd "	8,400
–	Assistant Collectors and Magistrates	4,800 to 6,000
1	Director of Public Instruction	24,000 to 30,000
	Bombay.	
3	Members of Council	64,000
1	Chief Secretary to Government	45,000
1	Secretary to Government	37,500
1	" "	30,000
1	Private Secretary to Governor	18,000
2	Under Secretaries to Government	15,000
1	Inspector-General of Prisons	21,600 to 24,000
1	Inspector-General of Police	30,000 to 36,000
4	Commissioners of Divisions	36,000 and 42,000
1	Commissioner in Sind	45,000
1	Municipal Commissioner, Bombay	36,000
13	Senior Collectors	27,900
15	Junior "	21,600
9	Assistant Collectors, 1st grade	14,400
17	" " 2nd "	10,800
18	" " 3rd "	8,400
–	" " 4th "	4,800 to 6,000
1	Collector in Sind	21,600
1	Assistant Commissioner in Sind	13,200
1	Judicial Commissioner in Sind	42,000
2	Additional Judicial Commissioner in Sind	36,000
3	District and Sessions Judges—1st grade	30,000
6	" " " 2nd "	27,900
11	" " " 3rd "	21,600
1	Prothonotary and Registrar, High Court	20,400 to 24,000
1	Administrator General and Official Trustee	24,000 to 30,000
1	Registrar, High Court	20,400
1	Chief Judge, Small Cause Court	24,000
1	Remembrancer of Legal Affairs	30,000
1	Government Solicitor	30,000
1	Advocate General	24,000
1	Agent to the Governor in Kathiawar	36,000
1	Resident and Senior Political Agent	27,000
27	Political Officers on time scale of pay	5,400 to 10,200 & 11,400 to 23,400
1	Director of Public Instruction	24,000 to 30,000

Indian Orders

The Star of India.

The Order of the Star of India was instituted by Queen Victoria in 1861, and enlarged in 1866, 1876, 1897, 1902, and 1911, and the dignity of Knight Grand Commander may be conferred on Princes or Chiefs of India, or upon British subjects for important and loyal service rendered to the Indian Empire; the second and third classes for services in the Indian Empire of not less than thirty years in the department of the Secretary of State for India. It consists of the Sovereign, a Grand Master (the Viceroy of India), the first class of forty-four Knights Grand Commanders (22 British and 22 Indian), the second class of one hundred Knights Commanders, and the third class of two hundred Companions, exclusive of Extra and Honorary Members, as well as certain additional Knights and Companions.

The Insignia are (i) the Collar of gold, composed of the lotus of India, of palm branches tied together in satire, of the united red and white rose, and in the centre an Imperial Crown; all enamelled in their proper colours and linked together by gold chains. (ii) The Star of a Knight Grand Commander is composed of rays of gold issuing from a centre, having thereon a star of five points in diamonds resting upon a light blue enamelled circular riband, tied at the ends and inscribed with the motto of the Order, *Heaven's Light our Guide*, also in diamonds. That of a Knight Commander is somewhat different, and is described below. (iii) The Badge, an onyx cameo having Her Majesty Queen Victoria's Royal Effigy thereon, set in a perforated and ornamental oval, containing the motto of the Order surmounted by a star of five points, all in diamonds. (iv) The Mantle of light blue satin lined with white, and fastened with a cordon of white silk with blue and silver tassels. On the left side a representation of the Star of the Order.

The ribbon of the Order (four inches wide for Knights Grand Commanders) is sky-blue, having a narrow white stripe towards either edge, and is worn from the right shoulder to the left side. A Knight Commander wears (a) around his neck a ribbon two inches in width, of the same colours and pattern as a Knight Grand Commander, and pendent therefrom a badge of a smaller size, (b) on his left breast a Star composed of rays of silver issuing from a gold centre, having thereon a silver star of five points resting upon a light blue enamelled circular ribbon, tied at the ends, inscribed with the motto of the Order in diamonds. A Companion wears from his left breast a badge of the same form as appointed for a Knight Commander, but of a smaller size pendent to a like ribbon of the breadth of one and a half inches. All Insignia are returnable at death to the Central Chancery, or if the recipient was resident in India, to the Secretary of the Order at Calcutta.

Sovereign of the Order:—H. I. M. The King.

Grand Master of the Order:—His Excellency the Viceroy and Governor-General of India, the Right Honourable Baron Chelmsford.

Honorary Knights Grand Commanders (G. C. S. I.)

The Zil-es-Sultan of Persia
Prince Louis d'Arenberg

Extra Knights Grand Commanders (G. C. S. I.)

H. M. the Queen Empress
H. R. H. The Duke of Connaught

Knights Grand Commanders (G. C. S. I.)

H. H. the Gaekwar of Baroda
H. H. the Maharana of Udaipur
H. H. the Maharajah of Jaipur
H. H. the Maharaja of Travancore
The Marquis of Lansdowne
Baron Reay
H. H. the Maharaja of Jammu and Kashmir
The Earl of Elgin
H. H. the Maharaja of Kohlapur
H. H. the Maharaja of Gwalior
Lord Harris
H. H. the Maharaja of Rewa
H. H. the Maharaja of Jodhpur
Baron Macdonnell
Earl Curzon of Keddleston
Baron Sandhurst
Lord George Hamilton
H. H. the Raja of Cochin
Baron Ampthill
Maharaja Sir Chandra Shamsher Jung of Nepal
H. H. the Maharaja of Orchha
H. H. the Maharaja of Mysore
Baron Hardinge of Penshurst
H. H. the Begum of Bhopal
Sir Steuart Bayley
Sir Dennis Fitz-Patrick
Sir Dighton Probyn
Baron Sydenham
Sir Arthur Lawley
Sir John Hewett
H. H. the Maharaja of Bikaner
H. H. Maha Rao of Kotah
General Sir O'Moore Creagh
General Sir Beauchamp Duff
General Sir Edmund George Barrow
H. H. the Raja of Kapurthala
H. H. the Nizam of Hyderabad
H. H. the Aga Khan
H. H. the Nawab of Tonk.

Knights Commanders (K. C. S. I.)

Sir Joseph West Ridgeway
Sir William Chichele Plowden
Sir David Miller Barbour
Sir Phillip Perceval Hutchins
Sir Henry Edward Stokes
Sir Henry Mortimer Durand
Maj.-Gen. Sir Oliver Richardson Newmarch
Sir Frederick William Richards Fryer
H. H. Maharao of Sirohi
Sir Courtenay Peregrine Ilbert
Brig. Surg.-Lieut.-Col. Sir Alfred Swaine Lethbridge
H. H. Maharao of Bundi
Sir William Mackworth Young

Sir Charles James Lyall
Sir Robert Joseph Crosthwaite
Sir William John Cunningham
Sir Richard Udny
Colonel Sir Howard Melliss
Sir Arthur Charles Trevor
Sir John Frederick Price
Sir Charles Montgomery Rivaz
Sir James Digges La Touche
Sir Henry Martin Winterbotham
Sir James Monteath
Lieut.-Col. Sir Donald Robertson
Sir Andrew Henderson Leith Fraser
Sir Hugh Shakespear Barnes
Sir William Roe Hooper
Sir Arundel Tagg Arundel
Sir Thomas Raleigh
H. H. Maharaja of Bhavnagar
Sir Arthur Henry Temple Martindale
Sir James Thomson
Sir Joseph Bampfylde Fuller
H. H. Raja of Chamba
Lieut.-Col. Arthur John, Baron Stamfordham
Sir Thomas William Holderness
Sir Lancelot Hare
Sir Charles Stuart Bayley
H. H. Raj Rana of Jhalawar
Raja Sir Tasadduk Rasul Khan of Jahangirabad, Oudh
Sir James Wilson
H. H. Maharaja of Alwar
H. H. Raja of Jind
Sir Henry Erle Richards
Sir Gabriel Stokes
Sir George Stuart Forbes
H. H. Raja of Ratlam
James Lyle, Baron Inchcape
Sir Harvey Adamson
Nawab of Murshidabad
Lieut.-Col. Sir James Robert Dunlop-Smith
Sir John Ontario Miller
Sir Lionel Montague Jacob
Sir Murray Hammick
Sir Krishna Govinda Gupta
Sir Leslie Alexander Selim Porter
Sir Spencer Harcourt Butler
Sir Robert Warrand Carlyle
H. H. Maharaja of Kishangarh
Sir Reginald Henry Craddock
Sir James McCrone Doule
Sir James Scorgie Meston
Sir Benjamin Robertson
Sir Richard Amphlett Lamb
Maharajadhiraj of Burdwan
Sir Elliot Graham Colvin
Sir Trevredyn Rashleigh Wynne
Surg.-Gen. Sir Charles Pardey Lukis
Sir George Casson Walker
H. H. Raja of Dhar
H. H. Raja of Dewas State (Senior Branch)
Surg.-Gen. Sir Francis Wollaston Trevor
H. H. Maharaja of Bhutan
Sir John Nathaniel Atkinson
Sir William Thomson Morison
Sir George Head Barclay
General Sir James Willcocks
Lieut.-Col. Sir G. Roos-Keppel
Sir M. F. O'Dwyer
Sir Saiyid Ali Imam
Sir D. C. Baillie
Sir Michael William Fenton
Sir Harold Arthur Stuart
Colonel Sir Sidney Gerald Burrard
Sir William Henry Soloman
Lieut.-Genl. Sir W. R. Birdwood.
Sir P. Sundaram Aiyar Sivaswami Aiyar
Sir Frederick William Duke
Sir Edward Albert Gait
H. H. Chief of Maler Kotla
H. H. Chief of Sirmur
Sir William Henry Clark
Sir William Stevenson Meyer
Lieut.-General Sir Arthur Arnold Barrett
Lt.-Col. Sir Percy Zachariah Cox
Sir Steyning William Edgerley
Sir Harrington Verney Lovett
Sir Robert Woodburn Gillan
Maharaj Sri Sir Bhairon Singh Bahadur
Sir Alexander Gordon Cardew
Lieut.-Col. Sir Hugh Daly
Sir C. H. A. Hill
H. H. Raja Malhar Rao Baba Saheb Pavar Dewas (Junior Branch)
H. H. Maharaja Bahadur of Cooch-Behar
H. H. The Jam Saheb of Navanagar
H. H. The Raj Saheb of Dhrangadra
Lieut.-Col. Sir F. E. Younghusband
Sir T. Morrison
General Sir Bhim Shumsher Jung Bahadur Rana of Nepal
Major-Gen. G. M. Kirkpatrick
Major-Gen. R. C. O. Stuart

Companions (C. S. I.)

Lieut.-Col. William Dickinson
Gen. Sir Peter Stark Lumsden
Major-Gen. Beresford Lovett
Major-Gen. Phillip Durham Henderson
Col. Leopold John Herbert Grey
Major-Gen. Henry Wylie
Sir Henry William Primrose
Herbert John Reynolds
Lieut.-Gen. Michael Weekes Willoughby
Raja Piari Mohan Mukharji of Uttarpara
Sir Frederick Russell Hogg
Col. Charles Edward Yate
William Rudolph Henry Merk
Chhatrapati Jagirdar of Allpura
Col. John Clerk
James Richard Naylor
David Robert Lyall
Sardar Jiwan Singh, of Shahzadpur
Col. George Herbert Trevor
Col. Frederick J. Home
Lieut.-Col. Henry St. Patrick Maxwell
Sir Jervoise Athelstane Baines
Sir Thomas Salter Pyne
Alan Cadell
Arthur Forbes
Sir Arthur Upton Fanshawe
Col. George Fletcher Ottley Boughey
James Fairbairn Finlay
Joseph Parker
Charles Walter Bolton
Horace Frederick D'Oyly Moule
Surg.-Gen. James Cleghorn
Col. Thomas Gracey
Col. James Aloysius Miley
Sir Henry Babington Smith
Henry Aiken Anderson
Lieut.-Col. Sir Arthur Henry McMahon
Sir Henry Evan Murchison James
James Knox Spence
Charles William Odling
Alexander Walmesley Cruickshank
David Norton
Thomas Stoker
Sir Edward Richard Henry

Lucas White King
Sir Mackenzie Dalzell Chalmers
Surgn.-Gen. David Sinclair
Henry Farrington Evans
Lt.-Col. John Muir Hunter
Richard Gillies Hardy
Sir Frederick Robert Upcott
Herbert Charles Fanshawe
Sir Frederick Styles Philpin Lely
George Robert Irwin
Lieut.-Gen. Sir George Lloyd Reilly Richardson
Robert Burton Buckley
Arthur Frederick Cox
Charles Gerwien Bayne
Hartley Kennedy
Sir Edwin Grant-Burls
Major-Gen. Trevor Bruce Tyler
William Charles Macpherson
Lt.-Col. James Alexander Lawrence Montgomery
Lt.-Gen. Henry Doveton Hutchinson
Raja of Burdwan
Nawab of Pahasu
Sardar Badan Singh of Malaudh
Sir Thomas Gordon Walker
Col. James White Thurburn
Alfred Brereton
William Thomas Hall
Richard Townsend Greer
Col. Robert Henry Jennings
Sir Louis William Dane
Sir Alfred Macdonald Bulteel Irwin
Col. James Bird Hutchinson
Raja Ram Pal of Kotlehr
Hermann Michael Kisch
Sir Cecil Michael Wilford Brett
Herbert Bradley
Sir Frank Campbell Gates
John Mitchell Holms
Percy Seymour Vessey Fitzgerald
Lt.-Col. Willoughby Pitcairn Kennedy
Raja Narendra Chand
Arthur Delaval Younghusband
Oscar Theodore Barrow
Col. Howard Goad
Francis Alexander Slacke
Saiyid Husain Bilgrami
Percy Comyn Lyon
Algernon Robert Sutherland
Sir George Watson Shaw
William Arbuthnot Inglis
Romer Edward Younghusband
Major-General Herbert Mullaly
John Alexander Broun
Col. Henry Finnis
Maj.-Gen. Sir Alfred William Lambart Bayly
Maurice Walter Fox-Strangways
William Lochiel Sapte Lovett Cameron
Sir Edward Douglas Maclagan
Raja Madho Lal
John Stratheden Campbell
Lieut.-Col. Charles Herbert
Sir Ashutosh Mukharji
Maj.-Gen. Sir Henry Montague Pakington Hawkes
Dr. Sir Rash Behari Ghosh
Francis Capel Harrison
Comdr. Sir Hamilton Pym Freer-Smith
Andrew Edmond Castlestuart Stuart
Norman Goodford Cholmeley
Walter Francis Rice
Havilland Le Mesurier
Cecil Edward Francis Bunbury
Major-General Reginald Henry Mahon
Capt. Allen Thomas Hunt
Walter Badock
James Mollison
Pirajirao Bapu Sahib Ghatge
John Walter Hose
Charles Ernest Vear Goument
Herbert Lovely Eales
Frederick Beadon Bryant
Frank George Sly
George Moss Harriott
Ernest Herbert Cooper Walsh
Sir Edward Vere Levinge
Robert Nathan
Lieut.-Col. Charles Archer
James Peter Orr
Herbert Alexander Casson
William Axel Hertz
Sir Mahadev Bhaskar Chaubal
George Seymour Curtis
Brevet-Lieut.-Colonel Francis Aylmer Maxwell
Brevet-Lieut.-Colonel Clive Wigram
Herbert Thompson
Rao Bahadur Nanak Chand
Surgeon-General William Burney Bannerman
Lieut.-Col. Sir John Ramsay
Stuart Lockwood Maddox
Gilbert Thomas Walker
Lieut.-Col. Phillip Richard Thornhagh Gurdon
Khan Zulfikar Ali Khan of Maler Kotla
Surgeon-General George Francis Angelo Harris
Edmund Vivian Gabriel
John Stuart Donald
Henry Montague Segundo Mathews
Arthur Crommelin Hankin
Faridoonji Jamshedji
Maulvi Ahmad Hussain
Horace Charles Mules
H. H. Raja Bije Chand, Chief of Kahlur
Lieut.-Col. Arthur Russell Aldridge
Lieut.-Col. Mathew Richard Henry Wilson
John Charles Burnham
Col. Thomas Francis Bruce Renny-Tailyour
Michael Kennedy
Thakor Karansinghji Vajirajji
Col. Alain Chartier de Lotbiniere Joly de Lotbiniere
Major-General Sir Herbert Vaughan Cox
Brev.-Col. Robert Smelton Maclagan
Lieut.-Col. Charles Mowbray Dallas
Edward Henry Scamander Clarke
Sir Jagadish Chandra Bose
Abbas Ali Baig
Oswald Campbell Lees
Lt.-Col. G. G. Giffard
F. W. Johnston
William Henry Lucas
A. L. Saunders
Vakhatsinghji Kesrisinghji
Paul Gregory Melitus
Lieut.-Col. Albert Edward Woods
William Exall Tempest Bennett
Hon. Maj. Nawabzada Obaidullah Khan
William Ogilvie Horne
William Harrison Moreland, C.I.E.
Diwan Bhdr. Chaube Raghunath Das, of Kotah
Col. Lestock Hamilton Reid
Surg.-Gen. Henry Wickham Stevenson
Hon. Lieut.-Col. Raja of Lambagraon
Lionel Davidson
George Carmichael
Lieut.-Col. Donald John Campbell MacNabb
Lieut.-Col. Henry Walter George Cole
Stuart Mitford Fraser
Henry Venn Cobb

Henry Wheeler
F. W. Newmarch
Sardar Daljit Singh of Jullunder
Lt.-Col. Raj Kumar Bir Bikram Singh
Walter Maude
Bertram S. Carey
Michael Nethersole
Henry Ashbrooke Crump
William James Reid
Mysore Kantharaj Urs
O. V. Bosanquet
Walter Gunnell Wood
John Cornwallis Godley
A. Butterworth
S. M. Edwardes
N. D. Beatson-Bell
Lt.-Col. F. H. Elliott
H. J. Maynard
R. P. Russell
J. B. Brunyate
Lt.-Col. A. B. Dew
W. M. Hailey
H. T. Keeling
A. H. Grant
H. Sharp.
L. C. Porter
R. R. Scott
Lieut.-Col. J. W. E. Douglas-Scott Montagu
Rear-Admiral Arthur Hayes-Sadler
Laurence Robertson
John Ghest Cumming
Lieut.-Col. Stephen Lushington Aplin
Sir James Houssemayne DuBoulay
John Barry Wood
H. E. Shaikh Jabir bin Mubarak al Subah, Shaikh of Kuwait
H. E. C. Dobbs
Major-General A. W. Movey
Col. L. A. C. Girdon
T. A. Chalmers
R. Burn
J. H. Kerr
G. B. H. Fall
Brig. General W. C. Knight
Lt.-Col. C. Kaye

OFFICERS OF THE ORDER.

Secretary, J. B. Wood
Registrar, Col. Sir Douglas Dawson

The Most Eminent Order of the Indian Empire.

This Order, instituted by H. M. Queen Victoria, Empress of India, Jan. 1st, 1878, and extended and enlarged in 1886, 1887, 1892, 1897, and 1902, is conferred for services rendered to the Indian Empire, and consists of the Sovereign, a Grand Master, thirty-two Knights Grand Commanders (of whom the Grand Master is first and principal), ninety-two Knights Commanders, and an indefinite number of Companions (not exceeding, without special statute, 20 nominations in any one year); also Extra and Honorary Members over and above the vacancies caused by promotion to a higher class of the Order, as well as certain Additional Knights and Companions appointed by special statute Jan. 1st, 1909, commemorative of the 50th Anniversary of the assumption of Crown Govt. in India.

The Insignia are: (*i*) The COLLAR of gold, formed of elephants, lotus flowers, peacocks in their pride, and Indian roses, in the centre the Imperial Crown, the whole linked together with chains; (*ii*) The STAR of the Knight Grand Commander, comprised of five rays of silver, having a small ray of gold between each of them, the whole alternately plain and scaled, issuing from a gold centre, having thereon Her Majesty Queen Victoria's Royal Effigy, within a purple circle, edged and lettered gold, inscribed *Imperatricis Auspiciis*, and surmounted by an Imperial Crown gold; (*iii*) The BADGE, consisting of a rose, enamelled gules, barbed vert, and having in the centre Her Majesty Queen Victoria's Royal Effigy, within a purple circle, edged and lettered gold, inscribed *Imperatricis Auspiciis*, surmounted by an Imperial Crown, also gold; (*iv*) The MANTLE is of Imperial purple satin, lined with and fastened by a cordon of white silk, with purple silk and gold tassels attached. On the left side a representation of the Star of the Order.

A Knight Commander wears: (*a*) around his neck a ribbon two inches in width, of the same colour (purple) and pattern as a Knight Grand Commander, pendent therefrom a badge of smaller size: (*b*) on his left breast a star, similar to that of the first class, but the rays of which are all of silver.

The above mentioned Insignia are returned at death to the Central Chancery, or if the Knight was resident in India to the Secretary of the Order at Calcutta.

A Companion wears from the left breast a badge (not returnable at death) of the same form as appointed for a Knight Commander, but of smaller size, pendent to a like ribbon of the breadth of one and a half inches.

Sovereign of the Order:—The King, Emperor of India.

Grand Master of the Order:—Baron Chelmsford.

Honorary Knights Grand Commanders, (G. C. I. E.)

The *ex*-Emperor of Korea

Shaikh Sir Khazal Khan, Shaik of Mohammerah and Dependencies.

Extra Knight Grand Commander (G. C. I. E.)

The Duke of Connaught

Knights Grand Commanders (G.C.I.E.)

Lord Reay
The Rao of Cutch
Lord Lansdowne
Lord Harris
The Nawab of Tonk
Lord Elgin
The Wali of Kalat
Lord Sandhurst
Maharaja of Karauli
Thakur Sahib of Gonda
Thakur Sahib of Morvi
Sir George Faudel-Phillips
The Maharaja of Benares
Sir Sher Muhammad Khan of Palanpur
Lord Curzon of Keddleston
The Maharaja of Jaipur
The Maharaja of Orchha
Lord Ampthill
Maharao of Bundi
General Sir Alfred Gaselee
The Maha Rao of Sirohi

The Aga Khan
The Maharaja of Travancore
Lord Lamington
The Begam of Bhopal
Sir Edmond Elles
The Nawab of Janjira
Sir Walter Laurence
Sir Arthur Lawley
The Maharaja of Bikaner
The Maha Rao of Kotah
Lord Sydenham
The Nawab of Rampur
Maharaj Sir Kishen Parshad
Lord Hardinge
Lord Carmichael
Maharaja of Kashmir
Sir Louis Dane
Maharaja of Bobbili
Lord Stamfordham
Sir Guy Fleetwood Wilson
Sir John Jordan
The Maharana of Udaipur
The Maharaja of Patiala
The Mir of Khairpur
The Raja of Cochin
Lord Pentland
The Raja of Pudukottai
Lord Willingdon
Maharaja of Kolhapur
The Yuvaraja of Mysore
Sir Charles Stuart Bayley
Maharaja of Darbhanga
H. H. the Maharaja of Jind

Honorary Knights Commanders (K. C. I. E.)

Sir Leon E. Clement-Thomas
H. E. Shaikh Sir Khazal Khan; Shaikh of Mohammerah and Dependencies
Dr. Sven Hedin
The Sultan of Shehr and Mokalla
Prince Ismail Mirza, Amir-i-Akram
Cavaliere Filippo De'Filippi
General Sir Bhim Shum-Shere Jung Bahadur, Rana of Nepal

Knights Commanders (K. C. I. E.)

Sir Alexander Meadows Rendel
Sir George Christopher Molesworth Birdwood
Surg.-Gen. Sir Benjamin Simpson
Sir Albert James Leppoc Cappel
Sir Donald Mackenzie Wallace
Sir Alfred Woodley Croft
Sir Bradford Leslie
Sir Arthur Baron Carnock
Sir Guildford Molesworth
Sir Frederick Russell Hogg
Sir Henry Mortimer Durand
Sir Arthur George Macpherson
Sir Henry Stuart Cunningham
Raja of Lunawara
Sir Roper Lethbridge
Sir Edward Charles Kayll Ollivant
Sir Henry Hoyle Howorth
Sir Henry Seymour King
Baron Inchcape
Col. Sir Henry Revenshaw Thuillier
Sir Wm. R. Brooke
Maharaja of Gidhaur
Lieut.-Col. Sir Adelbert Cecil Talbot
H. H. Maharaja of Ajaigarh
Sir Henry William Bliss
Nawab of Loharu
Sir John Jardine
Rear-Admiral Sir John Hext
Sir Mancherjee Bhownaggree
Col. Sir Thomas Holdich
Sir Andrew Wingate
Raja Sir Harnam Singh, Ahluwalia
Sir S. Subramaniya Aiyar
Sir Alexander Cunningham
Sir Henry Evan Murchison James
Nawab Sir Shahbaz Khan, Bugti of Baluchistan
Sir James George Scott
Sir Lawrence Hugh Jenkins
Sir Herbert Thirkell White
Surg.-Gen. Sir Benjamin Franklin
Sir Frederick Augustus Nicholson
Sir Arthur Upton Fanshawe
Raja Dhiraj of Shahpura
Sir Gangadhar Rao Ganesh, Chief of Miraj (Senior Branch)
Brevet-Col. Sir Buchanan Scott
Col. Sir John Walter Ottley
H. H. Raja of Sailana
Lieut.-Col. Sir Francis Edward Younghusband
Major-General Sir James R. L. Macdonald
Sri Sir Ugyen Wangchuk, Tongsa Penlop of Bhutan
Sir Fredric Styles Philpin Lely
Lt.-Col. Sir Arthur Henry McMahon
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Sir Francis Whitmore Smith
Nawab of Pahasu
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Sir Arthur Naylor Wollaston
Sir Thomas Henry Holland
Nawab of Hyderabad
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Raja of Mahmudabad
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Maharajadhiraja of Burdwan
Raja of Poonch
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George Cunningham Buchanan
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Leonard William Reynolds
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H. H. the Princess Victoria of Schleswig-Holstein
H. H. the Princess Marie-Louise of Schleswig-Holstein
Baroness Kinloss
Dowager Countess of Mayo
Lady Jane Emma Crichton
Dowager Countess of Lytton
Dowager Baroness Lawrence
Lady Temple
Dowager Baroness Napier of Magdala
Lady Grant Duff
Dowager Marchioness of Dufferin and Ava
Lady Randolph Spencer-Churchill
Baroness Reay
H. H. Maharani of Cooch-Behar
Marchioness of Lansdowne
Baroness Harris
H. H. Maharani of Gwalior
Constance Mary Baroness Wenlock
H. H. Maharani Sahib Chimna Bai Gaekwar
H. H. Rani Sahib of Gondal
H. H. the Dowager Maharani of Mysore
Lady George Hamilton
H. H. the Maharani Sahiba of Udaipur
Alice, Baroness Northcote
Nora Henrietta, Countess Roberts
Amelia Maria, Lady White
Mary Katherine, Lady Lockhart
Baroness Ampthill
Countess of Minto
Marchioness of Crewe
H. H. Begum of Bhopal
H. H. Maharani Shri Nundkunvarba

THE KAISAR-I-HIND MEDAL.

This decoration was instituted in 1900, the preamble to the Royal Warrant—which was amended in 1901 and 1912—being as follows:—"Whereas We, taking into Our Royal consideration that there do not exist adequate means whereby We can reward important and useful services rendered to Us in Our Indian Empire in the advancement of the public interests of Our said Empire, and taking also into consideration the expediency of distinguishing such services by some mark of Our Royal favour: Now for the purpose of attaining an end so desirable as that of thus distinguishing such services aforesaid, We have instituted and created; and by these presents for Us, Our Heirs and Successors, do institute and create a new Decoration." The decoration is styled

"The Kaisar-i-Hind Medal for Public Service in India" and consists of two classes. The Medal is an oval shaped Badge or Decoration—in gold for the First Class and in silver for the Second Class—with the Royal Cypher on one side and on the reverse the words "Kaisar-i-Hind for Public Service in India;" it is suspended on the left breast by a dark blue ribbon.

Recipients of the 1st Class.

Abdus Samad Khan of Rampur
Ahmad, Khan Bahadur Qazi Khalil-ud-Din
Allnut, The Rev. Samuel Scott
Amarchand, Rao Bahadur Ramnarayan
Ampthill, Margaret, Baroness
Ashton, Albert Frederick
Barber, Benjamin Russell
Barnes, Major Ernest
Babu, Sir Kailas Chandra, Rai Bahadur
Beaty, Francis Montagu Algernon
Beck, Miss Emma Josephine
Behari Lal Dhingra, Dr.
Bell, Lt.-Col. Charles Thornhill
Benson, Lady
Bentley, Dr. Charles Albert
Bhandari, Rai Bahadur Gopal Das
Bhavnagar, Maharani of,
Bijni, Rani Abhayeswaridebi of
Bikanir, Maharaja of
Bingley, Major General Alfred
Biwalkar, Sardar Parashram Krishnarao
Bonig, Max Carl Christian
Booth-Tucker Frederick St. George de Lautour
Bosanquet, Oswald Vivian
Bolt, Captain R. H.
Bramley, Percy Brooke
Bray, General Denys DeSaumarez
Broadway, Alexander
Brown, Rev. A. E.
Brown, Rev. W. E. W.
Brunton, James Forest
Buchanan, Rev. John
Burn, Richard
Burnett, General Sir Charles John
Calnan, Denis
Campbell, Colonel Robert Neil
Campion, John Montriou
Carleton, Marcus Bradford
Carlyle, Lady
Carmichael, Lady
Carter, Edward Clark
Chandra, Rai Bahadur Hari Mohan
Chatterton, Alfred
Chaudhuri, Raja Sarat Chandra Rai
Chetty, Dewan Bahadur K. P. Puttanna
Chinai, Ardeshir Dinshaji
Chitnavis, Shankar Madho
Coldstream, William
Comley, Mrs. Alice
Copeland, Theodore Benfey
Cousens, Henry
Cowasjee, Merwanjee
Cox, Arthur Frederick
Crawford, Francis Colomb
Cullen, Rev. Dr. Peter
Dane, Lady
Darbhanga, Maharaja of
Das, Ram Saran
Davies, Arthur
Davies, Mrs. Edwin
Dawson, Brevet-Colonel Charles Hutton
Deane, Lieutenant-Colonel Herbert Edward
deLotbiniere, Lieutenant-Colonel Alain C. Joly
Dewas (Junior Branch), Raja of
Dhar, Her Highness the Rani Sahiba Luxmiba Pavar of
Dyal Singh, Sardar Man, Sardar Bahadur
DuBern, Jules Emile
Dyson, Colonel Thomas Edward
Earle, The Hon'ble Sir Archdale
Egerton, William
Ewing, The Rev. Dr. J. C. R.
Ferard, Mrs. Ida Margaret
Firth, Mrs. E. J. (with Gold Bar)
Francis, Edward Belcham
Gandhi, Mohandas Karamchand
Ghosal, Mr. Jyotsnanath
Glazebrook, N. S.
Glean, Henry James Heamey
Gonzaga, Rev. Mother
Graham, The Rev. John Anderson
Graham, Mrs. Kate
Grattan, Lieutenant-Colonel Henry William
Guilford, The Rev. E. (with Gold Bar)
Gwalior, Maharaja of
Gwyther, Lieut.-Colonel Arthur
Hahn, The Rev. Ferdinand
Haig, Lieutenant-Colonel Patrick Baltour
Hall, Harold Fielding Patrick
Hamilton, Major Robert Edward Archibald
Harvest, Lieut.-Colonel Herbert de Vere
Hildesley, The Rev. Alfred Herbert
Hodgson, Edward Marsden
Hogan, W. J. Alexander
Holderness, Sir Thomas William
Home, Walter
Howard, Mrs. Gabrielle Louise Caroline
Hume, The Rev. R. A.
Husband, Major James
Hutchinson, Sir Sydney Hutton Cooper
Hutchinson, Major William Gordon
Hutwa, The Maharani Jnan Manjari Kuari of
Hydari, Mrs. Amina
Irvine, Lieutenant-Colonel Thomas Walter
Ismail, Muhammad Yusuf
Ives, Harry William Maclean
Jackson, Rev. James Chadwick
Jacob, Colonel Sir Samuel Swinton
James, Lieutenant-Colonel Charles Henry
Jankibai
Kanta Prasad, Lt.-Col.
Kapur, Raja Ban Bihari
King, Mrs. D.
Kirkpatrick, Clarence
Klopsch, Dr. Louis
Ko, Taw Sein
Kothari, The Hon'ble Mr. Jehangir Hormusji
Kunverba, Her Highness Shri Nund, Maharani of Bhavnagar
Lamb, The Hon'ble Sir Richard Amphlett
Lindsay, D'Arcy
Ling, Miss Catharine Frances
Lovett, The Hon'ble Mr. Harrington Verney
Luck, Wilfred Henry
Lukis, Lady
Lyall, Frank Frederick
Lyons, Surgeon-General Robert William Steele
MacLean, Rev. J. H.
Macwatt, Lieutenant-Colonel Robert Charles
Madhav Rao, Vishwanath Patankar
Madhavan Nair, Dr. T.
Mahdi Husain, Nawab Mirza
Mahomed Ajmal Khan, Hakim, *Hazik-ul-Mulk*
Malegaon, Raje of
Malvi Tribhuvandas Narottamdas
Manu, Dr. Harold

Manners-Smith, The Hon'ble Mr. Francis St. George
Mary of St. Paula, Rev. Mother
Mayes, Herbert Frederick
McCarrison, Major Robert
McCloghry, Colonel James
Miller, The Rev. William
Minto, Mary Caroline
Motilal Manekchand, Sheth
Morgan, George
Morrison, Honorary Captain James
Muhammad Husain Khan, Khan Bahadur
Muir Mackenzie, Lady Therese
Murray, George Ramsay
Naidu, Mrs. Sarojini
Nanak Chand
Nariman, Dr. Temulji Bhikaji
Narsinghgarh, Her Highness the Rani Shiv Kunwar Sahiba of
Neve, Dr. Arthur
Newton, Dr. Henry Martyn
Nichols, the Rev. Dr. Charles Alvord
Nicholson, Sir Frederick Augustus
Nisbet, John
Noyce, William Florey
O'Byrne, Gerald John Evangelist
Oldham, Charles Evelyn Arbuthnot William
O'Donnel, Dr. Thomas Joseph
O'Meara, Major Eugene John
Pandit Sitaram Narayan
Panna, Maharani of
Patanjpye, Raghunath Purshottam
Pedley, Dr. Thomas Franklin
Phelps, Edwin Ashby
Pitcher, Colonel Duncan George
Plant, Captain William Charles Trew Gray Gambier
Pollen, Dr. J.
Poynder, Lieut.-Colonel John Leopold
Reed, Miss M.
Reid, Frederick David
Reynolds, Leonard William
Robson, Dr. Robest George
Rondy, The Very Rev. The Abbe Noel
Rost, Major Ernest Reinhold
Row, Dr. Raghavendra
Roy, Babu Harendra Lal
Roy, Rao Jogendra Narayan
Sailana, Raja of
Samthar, Maharaja of
Sell, The Rev. Canon Edward
Semple, Lieut.-Colonel Sir David
Sharp, Henry
Sharpe, Walter Samuel
Shepherd, Rev. James
Sheppard, Mrs. Adeline B.
Sheppard, William Didsbury
Shillidy, the Rev. John
Shore, Lieut.-Colonel Robert
Shoubridge, Major Charles Alban Grevis
Singh, Munshi Ajit
Singh, Raja Bhagwan Bakhsh
Singh, Rai Hira
Singh, Raja Kamaleshwari Pershad
Sinha, Purnendu Narayan
Sita Bai
Skinner, The Rev. Dr. William
Skrefsrud, The Rev. Larsorsen
Smith, Lieut.-Colonel Henry
Sorabji, Miss Cornelia
Southon, Major Charles Edward
Spence, Christina Philippa Agnes
St. Leger, William Douglas
St. Lucie, Reverend Mother
Stanes, Robert
Stokes, Dr. Williams
Sukhdeo Prasad, Pandit
Surat Kuar, Rani Sahiba
Tabard, The Rev. Antoine Marie
Talati, Edalji Dorabji
Taylor, The Rev. George Pritchard
Taylor, Dr. Herbert F. Lechmere
Thomas, The Rev. Stephen Sylvester
Thurston, Edgar
Tilly, Harry Lindsay
Tindall, Christian
Tucker, Major William Hancock
Turner, Dr. John Andrew
Tyndale-Biscoe, The Rev. Cecil Earle
Tyrrell, Major Jasper Robert Joly
Vandyke, Frederick Reginald
Vaughan, Lieut.-Colonel Joseph Charles Stœlke
Venugopala, Raja Bahadur
Wadhwan, The Rani Sahib Sita Bai of
Wadia, Hormasji Ardeshir
Wagner, Rev. Paul
Wake, Lieut.-Colonel Edward St. Aubyn (with Gold Bar)
Wakefield, George Edward Campbell
Walker, Lady Fanny
Walter, Major Albert Elijah
Ward, Major Ellacott Leamon
Waterhouse, Miss Agnes May
Wheeler, The Rev. Edward Montague
Whitehead, Mrs. J.
Whitton, The Rev. David
Wilkins, Colonel James Sutherland
Wilkinson, Lieut.-Colonel Edmund
Willingdon, The Lady
Wilson-Johnston, Joseph
Winter, Edgar Francis Latimer
Wood, Arthur Robert
Young, The Rev. John Cameron
Younghusband, Arthur Delaval
Younghusband, Lieut.-Col. Sir Francis Edward

Recipients of the 2nd Class.

Abul Fattah, Moulvi Saiyed
Abdul Ghani
Abdul Hussain, Mian Bhai
Abdul Kadir
Abdul Majid Khan, Colonel Muhammad
Abdul Majid Khan
Abdur Rahim
Abdur Razzak Khan, Subadar
Adavani, Motiram Showkiram
Advani, Mrs. Motiram S.
Agha Mohamed Khalil-Bin-Mohamed Karim
Ahmad, Mr. Mukhtar
Ali Shabash, Shaikh
Allen, Rev. Frank Van
Amar Nath, Lala
Amar Singh
Anastasie, Sister
Anderson, Andrew
Andrew, The Rev. Adam
Anscomb, Major Allen Mellers
Antia, Jamshedji Merwanji
Apte, Hari Narayan
Askwith, Miss Anne Jane
Atkinson, Lady Constance
Augustin, The Rev. Father
Aung, Mrs. Hla
Aziz Husain, Khan Sahib Mir

Badri Parshad
Bahmanji Mancherji
Baker, Honorary Major Thomas
Banerji, Professor Jamini Nath
Banks, Dr. Charles
Bapat, Risaldar Sadashiva Krishna
Bardsley, Miss Jane Blissett
Barnett, Miss Maude
Barton, Mrs. Sybil
Baw, Maung Kan
Bayley, Lieut.-Colonel Edward Charles
Beatson-Bell, Nicholas Dodd
Beg, Mirza Kalich Beg Fridun
Best, James Theodore
Beville, Lieut.-Colonel Francis Granville
Bhagwandas, Bai Zaoerbai
Bhajan Lal
Bhan, Lala Udhai
Bhide, Raoji Janardhan
Bhutt, Chhotelal Goverdhan
Birj Bihari Lal, Babu
Bisheshwar Nath, Lala
Biswas, Babu Anonda Mohan
Blackham Lieut.-Colonel Robert James
Blackwood, John Ross
Blake, The Rev. William Henry
Blenkinsop, Edward Robert Kaye
Bolster, Miss Anna
Borrah, Babu Balinarayan
Bose, Miss Kiroth
Bose, Miss Mona
Bowen, Griffith
Brahmanand, Pundit
Brander, Mrs. Isabel
Bray, Mrs. Constance
Bremner, Major Arthur Grant
Brock, Miss Lilian Winifred
Brough, The Rev. Anthony Watson
Browne, Charles Edward
Brown, Dr. Edith
Burt, Bryce Chudleigh
Cain, Mrs. Sarah
Caleb, Mrs. M.
Campbell, The Rev. Andrew
Campbell, Miss Kate
Campbell, Miss Susan
Campbell, Miss Mary Jane
Campbell, The Rev. Thomas Vincent
Carr, Miss Emma
Carr, Thomas
Cassels, Mrs. Laura Mary Elizabeth
Catherine, Sister
Cattell, Major Gilbert Landale
Cecilia, Sister Fannie
Chamberlain, The Rev. William Isaac
Chandler, The Rev. John Scudder
Chatterji, The Rev. K.C.
Chaudhuri, Purna Chundra
Chandhuri, P. S. R.
Chitale, Ganesh Krishna
Churchward, P. A.
Chye, Leong
Clancey, John Charles
Clark, Herbert George
Clerke, Honorary Major Louis Arthur Henry
Clutterbuck, Peter Henry
Coombs, George Oswald
Coombes, Josiah Waters
Correa, Miss Marie
Corthorn, Miss Alice
Cottle, Mrs. Adela
Coxon, Stanley William
Crow, Charles George
Cumming, James William Nicol
Cummings, The Rev. John Ernest
Cutting, Rev. William
Dadabhoy, Mrs. Jerbanoo
Dalrymple-Hay, Charles Vernon
Dann, Rev. George James
Das, Ram, Lala
Das, Mathura, Lala
Das, Niranjan
Datta, Dr. Dina Nath Pritha
Dawe, Miss Ellen
Dawson, Mrs. Charles Hutton
Deane, George Archibald
Deodhar, Gopal Krishna
Deoji, Hazi Ahmed, Khan Sahib
deKantzow, Mrs. Mary Aphrasia
Desmond, J.
Dewes, Lieut.-Colonel Frederick Joseph
Dexter, T.
Dhanpatrai, Sardar Bahadur
Dharm Chand, Lala
Dilshad Begum
Dip Singh, Thakur
Douglas, The Rev. John
Dun, Maung Ne
Dundas, Charles Lawrence
Dunlop, Alexander Johnstone
Durjan Singh, Thakur
Dutta, Mehta Harnam
Duval, Mrs. Ethel Aldersey
Dwane, Mrs. Mary
Eagles, Thomas Cazaly
Eaglesome, George
Edgell, Lieut.-Colonel Edward Arnold
Elwes, Mrs. A.
Emanuel, Mrs.
Evans, The Rev. John Ceredig
Evans, Miss Josephine Annie
Farkoonji, Mrs. Hilla Rustamji
Farrer, Miss Ellen Margaret
Farzand-i-Ahmad, Khan Bahadur, Kazi Saiyid
Ffrench, Lieut.-Colonel Thomas
Flashman, Thomas Charles
Fleming, James Francis
Fletcher, Miss
Forman, The Rev. Henry
Fox, Alfred Charles
Frances, Sister Jane
Fraser, Robert Thomson
Freynet, The Rev. Father Etienne
Fyson, Hugh
Gajjar, Mrs. Shivagauri
Galbibai, Bai
Gandhy, Mr. Pestonji Jamsetji
Garthwaite, Liston
George, Miss Jessie Eleanor
Gilman, Edward P. Reuben
Godfrey, Thomas Leonard
Goenka, Baijnath
Goodbody, Mrs.
Gorman, Patrick James
Goswami, Sri Sri Naradev Dakhinpat Adhikar
Govindal Lal, Lala
Gowardhandas, Chatrabhuj
Grant, Lieut.-Colonel John Weymis
Grant, Mrs., *nee* Miss Lilian Blong
Grant, Miss Jean
Grant, Miss Maria Alice
Gray, Commissary William David
Greany, Peter Mawe
Greenfield, Miss R.
Griessen, Albert Edward Pierre
Gulliford, The Rev. Henry
Gumbley, Mr. Douglas
Gune, Trimbak Raghunath

Gyi, Maung Pet
Hafiz Muhammad Walayatullah, Khan Bahadur
Haiyati Inabh Malik
Hanrahan, W. G.
Harrison, Henry
Harrison, Mrs. M. F.
Harrison, Robert Tullis
Hart, Miss Louisa
Harvey, Miss Rose
Hatch, Miss Sarah Isabella
Haworth, Major Lionel Berkeley Holt
Hayes, Miss Mary Lavinia
Henderson, Miss Agnes
Hickman, Mrs. A.
Hicks, Rev. G. E.
Higby, Miss Sarah J.
Higgins, Andrew Frank
Hill, Eliott
Hill, Henry Francis
Hoff, Sister, W. J. K.
Hoffman, The Rev. Father John, S.J.
Holbrooke, Major Bernard Frederick Roper
Holden, Major Hyla Napier
Holland, Dr. Henry Tristram
Homer, Charles John
Hope, Dr. Charles Henry Standish
Hopkyns, Mrs. E.
Hughes, Frank John
Hunter, Honorary Captain James
Hutchison, Dr. John
Ibrahim, Moulvi Muhammad
Ihsan Ali
Jackson, Mrs. K.
Jaijee Bai (Mrs. Petit)
Jainath, Atal Pandit
Jambusarvala, A. Horgovandas
Jivanandan
Joglekar, Rao Bahadur Ganesh Venkatesh
John, Rev. Brother
Johnston, Augustus Frederick
Johnstone, Mrs. Rosalie
Jones, The Rev. John Peter
Jones, The Rev. Robert
Jones, The Rev. John Pengwern
Joshi, Trimbak Waman
Joshi, K. D.
Joss, Miss F.
Joti Prasad, Lala
Judd, C. R.
Jung, Sher, Khan Bahadur
Jwala Prasad, Mrs.
Jwala Singh, Sirdar
Kalubava, Azam Kesarkhan
Kanow, Yasuf
Kapadia, Miss Motibai
Karve, Dhondo Keshav
Kastur Chand Daga, Seth, Sir
Kelavkar, Miss Krishnabai
Kelly, Claude Cyril
Kelly, Miss Eleanor Sarah
Ker, Thomas
Kharshedji, Miss S. K.
Khujoorina, Nadirshah Nowrojee
Kidar Nath, Lala
King, Robert Stewart
Kirloskar, Lakshman Kashinath
Kitchin, Mrs. M.
Knollys, Major Robert Walter Edmond
Knox, Major Robert Welland
Kothewala, Mulla Yusuf Ali
Kreyer, Lieut.-Colonel Frederick August Christian
Kugler, Miss Anna Sarah
Kyaw, Maung
Lajje Ram
Lang, John
Langhorne, Frederick James
Lankester, Dr. Arthur Colborne
Laughlin, Miss L. H. M.
Lawrence, Captain Henry Rundle
Lawrence, Henry Staveley
Leslie-Jones, Leycester Hudson
Lloyd, Miss Elizabeth
Locke, Robert Henry
Low, Charles Ernest
Lund, George
MacAlister, The Rev. G.
Mackenzie, Alexander McGregor
Mackenzie, Howard
Mackinnon, Miss Grace
Macleod, Lieut.-Colonel John Norman
Mackellar, Dr. Margaret
Macphail, The Rev. James Merry
Macphail, Miss Alexandrina Matilda
Macrae, The Rev. Alexander
Madan, Mr. Rustamji Hormasji
Maddox, Lieut.-Colonel Ralph Henry
Madeley, Mrs. E. M.
Mahadevi, Srimati
Mahommed Allanur Khan
Maiden, J. W.
Maitra Babu Bhuban Mohan
Mallik, Sashi Bhusan
Maracan, Esmail Kadir
Marie, Sister
Marier, The Rev. Frederick Lionel
Mary of St. Vincent, Sister
Mary, Sister Eleanor
Masani, Rustam Pestonji
Matthews, Rev. Father
McCowen, Oliver Hill
McDonald, Joseph James
McGregor, Duncan
McKenzie, Miss Allice Learmouth
Mead, Rev. Cecil Silas
Mehta, Vaikuntrai Lallubhai
Mitcheson, Miss
Mitra, Rajeswar
Mitter, Mrs.
Moens, Mrs. Agnese Swettenham
Mohammed Khan
Moitra, Akhoy Kumar
Moore, Nursing Sister Dora Louisa Truslove
Moore, Miss Eleanor Louisa
Morris, Major Robert Lee
Motilal, Seth of Piparia
Mount, Captain Alan Henry
Moxon, Miss Lais
Mozumdar, Jadu Nath
Mudali, Valappakkam Daivasigomoni Thandavaroyan
Mudaliar, Bangalore Perumal Annaswami
Muhammad Yusuf, Shams-Ul-Ulama, Khan Bahadur
Mukharji, Babu Jogendra Nath
Mukharji Babu Nagendra Nath
Muller, Miss Jenny
Murli Dhar
Murphy, Edwin Joseph
Myat, Maung Htoon
Nabi Baksh
Nag, Mrs. Sasi Mukhi
Naimullah, Mohamed
Naoum Abbo
Napier, Alan Bertram

Narain, Har
Narayan Pershad, Babu
Narayan Singh, Sardar
Nariman, Khan Bahadur Manekji Kharsedji
Narclay, Mrs. E. M.
Narpat Singh, Babu
Nasrulla Khan, Mirza
Norris, Miss Margaret
O'Maung Po
O'Brien, Major Edward
O'Conor, Brian Edward
O'Hara, Miss Margaret
Old, Frank Shepherd
Orman, Honorary Captain Charles Henry
Orr, Adolphe Ernest
Orr, James Peter
Orr, Mrs. Amy
Outram, The Rev. A.
Owen, Captain Robert James
Owen, C. B.
Pal, Babu Barada Sundar
Palin, Major Randle Harry
Pandit, Vasudeo Ramkrishna
Parbati Bai, Mussammat
Park, The Rev. George W.
Parsons, Richard
Parsons, Ronald
Patel, Barjorji Dorabji
Patel, Jeona
Pathak, Vithal Narayan
Pathak, Ram Sahai
Paterson, Miss Rachel
Patrick, Sister
Perroy, Rev. Father
Pennell (*nee* Sorabji), Mrs. Alice Maude
Peters, Lieut.-Colonel Charles Thomas
Phailbus, Miss Rose Margaret
Phelps, Mrs. Maude Marion
Pierce, Miss Ada Louise
Pillay, Chinnappa Singaravalu
Pinney, Major John Charles Digby
Pinto, Miss Preciosa
Plowden, Major Trevor Chichele
Powell, John
Prabhu, Anantrao Raghunath
Prasad, Capt. Tulsi of Nepal
Pribhdas Shevakram
Price, The Rev. Eustace Dickinson
Prideaux, Frank Winckworth Austice
Purshotamdas Thakurdas
Pyo, Maung Tet
Rai, Babu Ram Kinkar
Rai Chaudhuri, Parbati Sankar
Raikes, Mrs. Alice
Rait, Miss Helen Anna Macdonald
Raj Bahadur, Pandit
Ram, Mr. Bhagat
Ramchandra, Daji
Ramgopal, Mallani, Seth
Ram Singh, M.V.O.
Ranade, Mrs. Ramabai
Ranjit Singh
Rattan Chand
Rattansi Muljl
Raushan Lal
Ray, Harendra Nath
Ray, Babu Sarat Chandra
Raza Ali Khan, Sardar
Reed, Lady Lilian
Richardson, Mrs. Catherine Stuart
Rita, Stiffani Edward
Robarts, Captain Charles Stuart Hamilton
Robinson, James
Robinson, Lieut.-Colonel William Henry Banner
Rocke, Captain Cyril E. A. Spencer
Roe, Colonel Cyril Harcourt
Roe, Mrs. Edith Mary
Rukmabai, Dr.
Rulach, Rev. George Bernard
Rustomji Faridoonji
Sadlier, A. W. Woodward
Sahai, Ram
Sahan Ram Kali
Sahay, Lala Deonath
Saint Monica, The Rev. Mother
Salkield, Tom
Samarth, Wasudeo Mahadeo
Samuels, Joseph
Savidge, Rev. Frederick William
Schultze, The Rev. Frederick Volkomor Paul
Scotland, Lieut.-Colonel David Wilson
Shah, Babu Lal Behari
Shah, Mohamed Kamal, Saiyid
Shah, Mohammad Nawaz
Shah, Reverand Ahmad
Shamnath
Shaw, Mrs. Hawthorne
Sheore, Raghunath Balwant
Shircore, William
Shyam Rikh, Raja Francis Xavier
Shyam Sunder Lall
Simcox, Arthur Henry Addenbrooke
Simkins, Charles Wylkins
Simon, Sister M.
Sinclair, Reginald Leahy
Singh, Apji Dhul
Singh, Bhai Takht
Singh, Didar
Singh, Babu Harnath

Singh, Makkhan
Singh, Babu Ramdhari
Singh, Sitla Baksh
Singh, Subadar Sher
Singh, Risaldar Major, Hanwant
Smith, Miss Ellen
Smith, The Rev. Frederick William Ambery
Smith, Mrs. Henry
Sommerville, The Rev. Dr. James
Sir Ram Kunwar, Thakurain
Starte, Oliver Harold Baptist
Steel, Alexander
Steele, The Rev. John Ferguson
Stephens, John Hewitt
Stephens, Mrs. Grace
Stevens, Mrs. (Ethel)
Stevenson, Surgeon-General Henry Wickham
Stewart, Major Hugh
Stewart, Mrs. Lilian Dorothea
Stewart, Thomas
St. Joseph, J. D.
Strip, Samuel Algernon
Stuart, Dr. (Miss) Gertrude
Sultan Ahmed Khan
Sunder Lal
Sundrabai, Bai
Surebhan Janji
Swainson, Miss Florence
Swiss, Miss Emily Constance
Taleyarkhan, Mr. Manekshah Cawasha
Taiib Mehdi Khan, Malik
Tambe, Dr. Gopal Rao Ramchandra
Tarapurwalla, Fardunji Kuvarji
Taylor, Rev. Alfred Prideaux
Taylor, Mrs. Florence Prideaux
Taylor, John Norman
Tha, Maung Po
Tha, Maung Shwe
Thakur Pershad, Pundit
Thein, Maung Po
Theobald, Miss
Thomas, Mrs. Mabel Fox
Thomas, Samuel Gilbert
Thompson, R. C.
Thomson, Robert Douglas
Thomssen, The Rev. G. Nicholas
Thorn, Miss Bertha
Thoy, Herbert Dominick
Timothy, Samuel
Tok, Maung Ba
Tok, Maung Po
Tomkins, Lionel Linton
Tudball, Miss Emma
Turner, Mrs. Vera
Umar Khan, Malik Zorawar Khan
Vale, Mrs. K.
Vaughan-Stevens, Dudley Lewis
Vijayaraghava Acharyar
Visvesvaraya, Mokshagundam
Wait, Robert William Hamilton
Wakefield, George Edward Campbell
Walewalker, P. Baburao
Waller, Frederick Chighton
Wanless, Dr. William James
Wares, Donald Horne
Webb-Ware, Mrs. Dorothy
Weighell, Miss Anna Jane
Weir, Henry
Western, Miss Mary Priscilla
Wildman, Miss Elizabeth Annie
Wilson, Mrs. E. R. B.
Wiseman, Honorary Captain Charles Sheriffe
Woerner, Miss Lydia
Wood, The Rev. A.
Wyness, Mrs. Ada
Yerbury, Miss J.
Young, Dr. M. Y.
Zahur-ul-Husain, Muhammad

Indian Names and Titles.

There is a bewildering multiplicity of Indian titles, made all the more difficult inasmuch as there is a difference of nomenclature between the titles of Hindus and Mahomedans. Some titles are hereditary and represent ruling chiefs or those nominally such (and of these there are no less than some 620, whilst of the titles themselves some 200 are known); others are personal honours conferred on individuals by the Indian Government, and even then sometimes made hereditary. Yet again, there are numerous complimentary titles, or specifications of office, expressed in Hindu phrases, of which we have occasionally supplied the interpretations. It must be added that though *caste* is often figuring in the names it has nothing whatever to do with the titles. Amir, Khan, Mir, Sultan, Sri, &c., are confusingly used as both titles and names.

The order of rank is thus given by Sir R. Lethbridge in "The Golden Book of India."

Hindu—Maharaja Bahadur, Maharaja, Raja Bahadur, Raja, Rai Bahadur, Rai Saheb, Rai.

Mohammedan—Nizam, Nawab Bahadur, Nawab, Khan Bahadur, Khan Saheb, Khan.

Parsis and Bene-Israelites—Khan Bahadur, Khan Saheb.

Afsur—a corruption of the English "officer."

Ahluwalia—name of a princely family resident at the village of Ahlu, near Lahore.

Akhundzada—son of a Head Officer.

Alijah (Sindhi)—of exalted rank.

Ali Raja—Sea King (Laccadives).

Amir (corruptly *Emir*)—a Mohammedan Chief often also a personal name.

Asaf—a Minister.

Baba—lit. "father;" a respectful "Mr.:" Irish "Your Honour."

Babu—strictly a 5th or still younger son of a Raja, but often used of any son younger than the heir, whilst it has also grown into a term of address=Esquire. There are, however, one or two Rajas whose sons are known respectively as—1st, Kunwar; 2nd, Diwan; 3rd, Thakur; 4th, Lal; 5th, Babu.

Bahadur—lit. "brave" or "warrior:" a title used by both Hindus and Mohammedans, often bestowed by Government; added to other titles it increases their honour, but alone it designates an inferior ruler.

Bakhshi—a revenue officer or magistrate.

Begum or *Begam*—the feminine of "Nawab" combined in Bhopal as "Nawab Begum."

Besar—apparently a large land-owner.

Bhonsle—name of a Maratha dynasty.

Bhup—title of the ruler of Cooch Behar.

Bhugti—name of a Baluch tribe.

Chhatrapati—one of sufficient dignity to have an umbrella carried over him.

Dada—lit. "grandfather" (paternal); any venerable person.

Daula an *Daulat*—State; also one in office.

Deb—a Brahminical priestly title; taken from the name of a divinity.

Dhiraj—"Lord of the Lands:" added to "Raja," &c., it means "paramount."

Diwan—a Vizier or other First Minister to a native Chief, either Hindu or Mohammedan, and equal in rank with "Sardar," under which see other equivalents. The term is also used of a Council of State.

Elaya Raja—title given to the heir of the Maharaja of Travancore.

Farzand (with defining words added)—"favorite" or "beloved."

Fateh—"victory."

Fath Jeang—"Victorious in Battle" (a title of the Nizam).

Gaekwar (sometimes *Guicowar*)—title with "Maharaja" added of the ruler of Baroda. It was once a caste name and means "cowherd, *i.e.*, the protector of the sacred animal; but later on, in common with "Holkar" and "Sindhia," it came to be a dynastic appellation and consequently regarded as a title. Thus, a Prince becomes "Gaekwar" on succeeding to the estate of Baroda;" Holkar," to that of Indore; and "Sindhia," to that of Gwalior.

Hafiz—guardian.

Haji—one who has made pilgrimage to Mecca.

Hiera Lal—"diamond ruby."

Holkar—see "Gaekwar."

Jah—a term denoting dignity.

Jam (Sindhi or Baluch)—Chief.

Kazi—(better written *Qazi*)—a Mohammedan magistrate.

Khan—originally the ruler of a small Mohammedan State, now a nearly empty title though prized. It is very frequently used as a name, especially by Afghans and Pathans.

Khwaja—a Persian word for "master," sometimes a name.

Kunwar or *Kumar*—the heir of a Raja.

Lal—a younger son of a Raja (strictly a 4th son, but see under "Babu").

Lokendra or *Lokindra*—"Protector of the World," title of the Chiefs of Dholpur and Dattia.

Mahant—a feudal title borne by the heads of a Hindu religious body.

Maharaja—the highest of hereditary rulers among the Hindus, or else a personal distinction conferred by Government. It has several variations as under "Raja," with the addition of *Maharaj Rana*; its feminine is *Maharani* (*maha*=great).

Malik—master, proprietor.

Mian—title of the son of a Rajput Nawab, resembling the Scottish "Master."

Mir—a leader, an inferior title which, like "Khan," has grown into a name. It is especially used by descendants of the Chiefs of Sind.

Mirza—if prefixed, "Mr," or "Esquire."

Mong, Moung, or *Maung* (Arakanese)—leader.

Moulvi or *Maulvi*—a learned man or teacher.

Mudaliyar or *Mud-liar*—a personal proper name, but implying "steward of the lands."

Mumtaz-ud-Daula—distinguished in the State (*Mulk*, in the country).

Munshi—president, or presiding official.

Myowun—"Mr."

Nawab—originally a Viceroy under the Moghal Government, now the regular leading title of a Mohammedan Prince, corresponding to "Maharaja" of the Hindus.

Nazim—a ruler (not to be confused with following).

Nizam—the title of the ruler of Hyderabad, the one Mohammedan Prince superior to Nawab.

Nono (Thibetan)—the ruler of Spitta.

Pandi or Pundi—a learned man.

Peshkup—manager or agent.

Prince—term used in English courtesy for "Shahzada," but specially conferred in the case of "Prince of Arcot" (called also "Armin-i-Arcot").

Raja—a Hindu Prince of exalted rank, but inferior to "Maharaja." The feminine is *Rani* (Princess or Queen), and it has the variations *Raj, Rana, Rao, Rai, Rawal, Rawat, Raikwar, Raikbar,* and *Raikat*. The form *Rai* is common in Bengal, *Rao* in S. & W. India.

Raj Rajeshwar—King of Kings.

Risaldar—commander of a troop of horses.

Saheb—the Native Hindu term used to or of a European ("Mr. Smith" would be mentioned as "Smith Saheb," and his wife "Smith Mem-Saheb," but in *addressing* it would be "Saheb," fem. "Saheba," without the name); occasionally appended to a title in the same way as "Bahadur," but inferior (=master). The unusual combination "Nawab Saheb" implies a mixed population of Hindus and Mohammedans.

Sahibzada—son of a person of consequence.

Said, Sayid, Saiyid, Sidi, Syed, Syud—various forms for a title adopted by those who claim direct male descent from Mohammed's grandson Husain.

Sardar (corrupted to *Sirdar*)—a leading Government official, either civil or military, even a Grand Vizier. Nearly all the Punjab Barons bear this title. It and "Diwan" are like in value and used by both Hindus and Mohammedans. So, but Mohammedans only, are "Wali," "Sultan," "Amir," "Mir," "Mirza," "Mian," and "Khan."

Sawai—a Hindu title implying a slight distinction (lit. one-fourth better than others).

Sawbwa (Burmese)—a Chief.

Shahzada—son of a King.

Shaikh or *Sheikh* (Arabic)—a Chief.

Shams-ul-Ulama—a Mohammedan title denoting "learned."

Shamshir-Jang—"Sword of Battle" (a title of the Maharaja of Travancore).

Sidi—a variation of "Said."

Sindhia—see under "Gaekwar."

Sri or *Shri*—lit. fortune, beauty: a Sanscrit term used by Hindus in speaking of a person much respected (never addressed *to* him; nearly="Esquire"); used also of divinities. The two forms of spelling are occasioned by the intermediate sound of the *s* (that of *s* in the German *Stadt*).

Subadar—Governor of a province.

Sultan—like "Sardar."

Syed, Syud—more variations of "Said."

Talukdar—an Oudh landlord.

Talpur—the name of a dynasty in Sind.

Thakur—a Hindu term equivalent to "Bahadur," whether as affix or alone.

Tumandar—a Persian word denoting some office

Umara—term implying the Nobles collectively.

Wali—like "Sardar." The Governor of Khelat is so termed, whilst the Chiefs of Cabul are both "Wali" and "Mir."

Zemindar or *Zamindar*—a landowner; orig. a Mohammedan collector of revenue.

Distinctive Badges.—An announcement was made at the Coronation Durbar in 1911, that a distinctive badge should be granted to present holders and future recipients of the titles of 'Diwan Bahadur', 'Sardar Bahadur', 'Khan Bahadur', 'Rai Bahadur', 'Rao Bahadur', 'Khan Sahib', Rai Sahib' and 'Rao Sahib'. Subsequently the following regulations in respect of these decorations were issued:—(1) The decoration to be worn by the holders of the titles above mentioned shall be a badge or medallion bearing the King's effigy crowned and the name of the title, both to be executed on a plaque or shield surrounded by a five-pointed star surmounted by the Imperial Crown, the plaque or shield being of silver gilt for the titles of Diwan, Sardar, Khan, Rai and Rao Bahadur, and of silver for the titles of Khan, Rai, and Rao Sahib. (2) The badge shall be worn suspended round the neck by a ribbon of one inch and a half in width, which for the titles of Diwan and Sardar Bahadur shall be light blue with a dark blue border, for the titles of Khan, Rai and Rao Bahadur light red with a dark red border, and for the titles of Khan, Rai and Rao Sahib dark blue with light blue border.

A Press Note issued in November, 1914, state:—The Government of India have recently had under consideration the question of the position in which **miniatures** of Indian titles should be worn, and have decided that they should be worn on the *left* breast fastened by a brooch, and not suspended round the neck by a ribbon as prescribed in the case of the Badge itself. When the miniatures are worn in conjunction with other decorations, they should be placed immediately after the Kaiser-i-Hind Medal.

Indian Distinguished Service Medal.—This medal was instituted on June 28th, 1907, by an Army Order published in Simla as a reward for both commissioned and non-commissioned officers of the regular and other forces in India. It bears on the obverse the bust of King Edward VII, and on the reverse a laurel wreath encircling the words For Distinguished Service. The

medal, 1⅜ inches in diameter, is ordered to be worn immediately to the right of all war medals suspended by a red ribbon 1¼ in. wide, with blue edges ⅛ in. wide. This medal may be conferred by the Viceroy of India.

Indian Order of Merit.—This reward of valour was instituted by the H. E. I. Co. in 1837, to reward personal bravery without any reference to length of service or good conduct. It is divided into three classes and is awarded to native officers and men for distinguished conduct in the field. On the advancement from one class to another the star is surrendered to the Government, and the superior class substituted, but in the event of the death of the recipient his relatives retain the decoration. The order carries with it an increase of one-third in the pay of the recipient, and in the event of his death the allowance is continued to his widow for three years. The First Class consists of a star of eight points, 1⅜ in. in diameter, having in the centre a ground of dark blue enamel bearing crossed swords in gold, within a gold circle, and the inscription Reward of Valour, the whole being surmounted by two wreaths of laurel in gold. The Second Class star is of silver, with the wreaths of laurel in gold; and the Third Class entirely of silver. The decoration is suspended from a simple loop and bar from a dark-blue ribbon 1¼ in. in width with red edges, bearing a gold or silver buckle according to class.

Order of British India.—This order was instituted at the same time as the Order of Merit, to reward native commissioned officers for long and faithful service in the Indian Army. Since 1878, however, any person European or native, holding a commission in a native regiment, became eligible for admission to the Order without reference to creed or colour. The First Class consists of a gold eight-pointed radiated star 1¼ in. in diameter. The centre is occupied by a lion statant gardant upon a ground of light-blue enamel, within a dark-blue band inscribed Order of British India, and encircled by two laurel wreaths of gold. A gold loop and ring are attached to the crown for suspension from a broad ornamental band $\frac{9}{16}$ in. in diameter, through which the ribbon, once blue, now red, is passed for suspension from the neck. The Second Class is $1\frac{7}{16}$ in. in diameter with dark-blue enamelled centre: there is no crown on this class, and the suspender is formed of an ornamental gold loop. The reverse is plain in both classes. The First Class carries with it the title Sirdar Bahadur, and an additional allowance of two rupees a day: and the Second the title of Bahadur, and an extra allowance of one rupee per day.

Indian Meritorious Service Medal.—This was instituted on July 27th, 1888, and on receipt of the medal the order states "a non-commissioned officer must surrender his Long Service and Good Conduct medal": but on being promoted to a commission he may retain the M. S. medal, but the annuity attached to it will cease. On the obverse is the diademed bust of Queen Victoria facing left, with a veil falling over the crown behind, encircled by the legend Victoria Kaisar-i-Hind. On the reverse is a wreath of lotus leaves enclosing a wreath of palm tied at the base, having a star beneath; between the two wreaths is the inscription for meritorious service. Within the palm wreath is the word India. The medal, 1⅜ in. in diameter, is suspended from a scroll by means of a red ribbon 1¼ in. wide. The medals issued during the reigns of Queen Victoria's successors bear on the obverse their bust in profile with the legend altered to EDWARDVS or GEORGIVS.

Laws and the Administration of Justice.

The indigenous law of India is personal and divisible with reference to the two great classes of the population, Hindu and Mahomedan. Both systems claim divine origin and are inextricably interwoven with religion, and each exists in combination with a law based on custom. At first the tendency of the English was to make their law public and territorial, and on the establishment of the Supreme Court at Calcutta in 1773 and the advent of English lawyers as judges, they proceeded to apply it to Europeans and Indians alike. This error was rectified by the Declaratory Act of 1780, by which Parliament declared that as against a Hindu the Hindu law and usage, and as against a Mahomedan the laws and customs of Islam should be applied. The rules of the Shastras and the Koran have been in some cases altered and relaxed. Instances can be found in the Bengal Sati Regulation Act of 1829; the Indian Slavery Act, 1843; the Caste Disabilities Removal Act of 1850; the Hindu Widows' Remarriage Act, 1856; and other Acts and Codes. To quote the Imperial Gazetteer, "A certain number of the older English statutes and the English common law are to a limited extent still in force in the Presidency Towns as applicable to Europeans, while much of the old Hindu and Mahomedan law is everywhere personal to their native fellow subjects; but apart from these, and from the customary law, which is as far as possible recognised by the Courts, the law of British India is the creation of statutory enactments made for it either at Westminster or by the authorities in India to whom the necessary law-giving functions have from time to time been delegated."

Codification.

Before the transfer of India to the Crown the law was in a state of great confusion. Sir Henry Cunningham described it as "hopelessly unwieldy, entangled and confusing." The first steps toward general codification were taken in 1833, when a Commission was appointed, of which Lord Macaulay was the moving spirit, to prepare a penal code. Twenty-two years elapsed before it became law, during which period it underwent revision from his successors in the Law Membership, and especially by Sir Barnes Peacock, the last Chief Justice of the Supreme Court of Calcutta. The Penal Code, which became law in 1860, was followed in 1861 by a Code of Criminal Procedure. Substantially the whole criminal law of British India is contained in these two Codes. One of the most eminent lawyers who ever came to India, Sir James Stephen, said "The Indian penal code may be described as the criminal law of England freed from all technicalities and superfluities, systematically arranged and modified in some few particulars (they are surprisingly few) to suit the circumstances of British India. It is practically impossible to misunderstand the code." The rules of Civil Procedure have been embodied in the Code of Civil Procedure. The Indian Penal Code has from time to time been amended. The Code of Civil Procedure was remodelled in 1908 and the Code of Criminal Procedure in 1898. These Codes are now in force.

European British Subjects.

Whilst the substantive criminal law is the same for all classes, certain distinctions of procedure have always been maintained in regard to criminal charges against European British subjects. Until 1872 European British subjects could only be tried or punished by one of the High Courts. It was then enacted that European British subjects should be liable to be tried for any offences by magistrates of the highest class, who were also justices of the peace, and by judges of the Sessions Courts; but it was necessary in both cases that the magistrate or judge should himself be a European British subject. In 1883 the Government of India announced that they had decided "to settle the question of jurisdiction over European subjects in such a way as to remove from the code at once and completely every judicial disqualification which is based merely on race distinctions." This decision, embodied in the Ilbert Bill, aroused a storm of indignation which is still remembered. The controversy ended in a compromise which is thus summarised by Sir John Strachey ("India"). "The controversy ended with the virtual, though not avowed, abandonment of the measure proposed by the Government. Act III of 1884, by which the law previously in force was amended, cannot be said to have diminished the privileges of European British subjects charged with offences, and it left their position as exceptional as before. The general disqualification of native judges and magistrates remains; but if a native of India be appointed to the post of district magistrate or sessions judge, his powers in regard to jurisdiction over European British subjects are the same as those of an Englishman holding the same office. This provision however is subject to the condition that every European British subject brought for trial before the district magistrate or sessions judge has the right, however trivial be the charge, to claim to be tried by a jury of which not less than half the number shall be Europeans or Americans.....Whilst this change was made in the powers of district magistrates, the law in regard to other magistrates remained unaltered." Since 1836 no distinctions of race have been recognised in the civil courts throughout India.

High Courts.

The highest legal tribunals in India are the High Courts of Judicature. These were constituted by the Indian High Courts Act of 1861 for Bengal, Bombay and Madras, and later for the United Provinces, superseding the old supreme and Sudder Courts. The Judges are appointed by the Crown; they hold office during the pleasure of the Sovereign; at least one-third of their number are barristers, one-third are recruited from the judicial branch of the Indian Civil Service, the remaining places being available for the appointment of Indian lawyers. Trial by jury is the rule in original criminal cases before the High Courts, but juries are never employed in civil suits in India.

For other parts of India High Courts have been formed under other names, the chief

difference being that they derive their authority from the Government of India, not from Parliament. In the Punjab and Burma there are Chief Courts, with three or more judges; in the other provinces the chief appellate authority is an officer called the Judicial Commissioner. In Sind the Judicial Commissioner is termed Judge of the Sudder Court and has two colleagues.

The High Courts are the Courts of appeal from the superior courts in the districts, criminal and civil, and their decisions are final, except in cases in which an appeal lies to His Majesty in Council and is heard by the Judicial Committee of the Privy Council in England. The High Courts exercise supervision over all the subordinate courts. Returns are regularly sent to them at short intervals and the High Courts are able, by examining the returns, by sending for proceedings, and by calling for explanations, as well as from the cases that come before them in appeal, to keep themselves to some extent acquainted with the manner in which the courts generally are discharging their duties.

Lower Courts.

The Code of Criminal Procedure provides for the constitution of inferior criminal courts styled courts of session and courts of magistrates. Every province, outside the Presidency towns, is divided into sessions divisions, consisting of one or more districts, and every sessions division has a court of session and a sessions judge, with assistance if need be. These stationary sessions courts take the place of the English Assizes, and are competent to try all accused persons duly committed, and to inflict any punishment authorised by law, but sentences of death are subject to confirmation by the highest court of criminal appeal in the province. Magistrates' courts are of three classes with descending powers. Provision is made and largely utilised in the towns, for the appointment of honorary magistrates; in the Presidency towns Presidency magistrates deal with magisterial cases and benches of Justices of the Peace or honorary magistrates dispose of the less important cases.

Trials before courts of session are either with assessors or juries. Assessors assist, but do not bind the judge by their opinions; on juries the opinion of the majority prevails if accepted by the presiding Judge. The Indian law allows considerable latitude of appeal. The prerogative of mercy is exercised by the Governor-General-in-Council and the Local Government concerned without prejudice to the superior power of the Crown.

The constitution and jurisdiction of the inferior civil courts varies. Broadly speaking, one district and sessions judge is appointed for each district: as District Judge he presides in its principal civil court of original jurisdiction; his functions as Sessions Judge have been described. For these posts members of the Indian Civil Service are mainly selected though some appointments are made from the Provincial Service. Next come the Subordinate Judges and Munsiffs, the extent of whose original jurisdiction varies in different parts of India. The civil courts, below the grade of District Judge, are almost invariably presided over by Indians. There are in addition a number of Courts of Small Causes, with jurisdiction to try money suits up to Rs. 500. In the Presidency Towns, where the Chartered High Courts have original jurisdiction, Small Cause Courts dispose of money suits up to Rs. 2,000. As Insolvency Courts the chartered High Courts of Calcutta, Bombay and Madras have jurisdiction in the Presidency towns. In the mofussil similar powers were conferred on the District Courts by the Insolvency Act of 1906.

Coroners are appointed only for the Presidency Towns of Calcutta and Bombay. Elsewhere their duties are discharged by the ordinary staff of magistrates and police officers unaided by jurors.

Legal Practitioners.

Legal practitioners in India are divided into Barristers-at-Law, Advocates of the High Court, Vakils and Attorneys (Solicitors) of High Courts, and Pleaders, Mukhtiars and revenue agents. Barristers and Advocates are admitted by each High Court to practise in it and its subordinate courts; and they alone are admitted to practise on the original side of some of the chartered High Courts. Vakils are persons duly qualified who are admitted to practise on the appellate side of the chartered High Courts and in the Courts subordinate to the High Courts. Attorneys are required to qualify before admission to practise in much the same way as in England. The rule that a solicitor must instruct counsel prevails only on the original side of certain of the High Courts. Pleaders practise in the subordinate courts in accordance with rules framed by the High Courts.

Organisation of the Bar.

At Calcutta, Madras, and Bombay there is a Bar Committee presided over, *ex officio*, by the Advocate-General. This body is elected by the barristers practising in each High Court, and its functions are to watch the interests of the Bar and to regulate its etiquette. At Allahabad, Lahore, Nagpore, and Rangoon a similar Bar Committee exists, but the electorate is extended to include the vakils or native pleaders, and the president is either the senior practising member of the Bar or the Government Advocate. In the larger Districts and Sessions Courts, an organisation representing the Bar is usually to be found, and in the subordinate Courts, including the Revenue Courts, similar machinery is generally in use. Pending an opportunity of detailed inquiries in India, these general descriptions must suffice.

Composition of the Bar.

A considerable change is occurring in the composition of the Indian Bar. The following extract from an informing article in the *Times* (May 25, 1914) indicates the character and incidence of this development: "During the last forty years, a striking change has taken place in the professional class. The bulk of practice has largely passed from British to Indian hands, while, at the same time, the profession has grown to an enormous extent. One typical illustration may be quoted. Attached to the Bombay High Court in 1871 there

were 38 solicitors, of whom 10 were Indian and 28 English, and 24 advocates, of whom 7 were Indian and 17 English. In 1911, attached to the same High Court, there were 150 solicitors, of whom more than 130 were Indian and the remainder English, and 250 advocates, of whom 16 only were English and the remainder Indian."

Law Officers.

The Government of India has its own law colleague in the Legal Member of Council. All Government measures are drafted in this department. Outside the Council the principal law officer of the Government of India is the Advocate-General of Bengal, who is appointed by the Crown, is the leader of the local Bar, and is always nominated a member of the Provincial Legislative Council. In Calcutta he is assisted by the Standing Counsel and the Government Solicitor. There are Advocates-General and Government Solicitors for Bombay and Madras, and in Bombay there is attached to the Secretariat a Legal Remembrancer and an Assistant Legal Remembrancer, drawn from the Judicial Branch of the Indian Civil Service. The Government of Bengal consults the Bengal Advocate-General, the Standing Counsel and the Government Solicitor, and has besides a Legal Remembrancer (a Civil Servant) and a Deputy Legal Remembrancer (a practising barrister); the United Provinces are equipped with a civilian Legal Remembrancer and professional lawyers as Government Advocate and Assistant Government Advocate; the Punjab has a Legal Remembrancer, Government Advocate and a Junior Government Advocate; and Burma a Government Advocate, besides a Secretary to the Local Legislative Council.

Sheriffs are attached to the High Courts of Calcutta, Madras and Bombay. They are appointed by Government, selected from non-officials of standing, the detailed work being done by deputy sheriffs, who are officers of the Court.

Law Reports.

The Indian Law Reports are published in four series—Calcutta, Madras, Bombay, and Allahabad, under the authority of the Governor-General in Council. They contain cases determined by the High Court and by the Judicial Committee on appeal from the particular High Court. These appeals raise questions of very great importance, and the Council of Law Reporting for England and Wales show their appreciation by printing the Indian Appeals in a separate volume, and have also compiled a digest of Indian Appeals covering the period 1874-1893. The other Provinces and States have series of reports issued under the authority either of the Judiciary or the State.

Legislative Power.

The supreme power of Parliament to legislate for the whole of India cannot be questioned. In practice, however, this power is little used, there being a majority of officials on the Imperial Legislative Council—a majority deliberately reserved in the India Councils Act of 1909—the Secretary of State is able to impose his will on the Government of India and to secure the passage of any measure he may frame, regardless of the opinion of the Indian authorities. Legislative Councils have been established both for the whole of India and for the principal provinces. Their constitution and functions are fully described in detailing the powers of the Imperial and Provincial Councils (q. v.). To meet emergencies the Governor-General is vested with the power of issuing ordinances, having the same force as Acts of the Legislature, but they can remain in force for only six months. The power is very little used. The Governor-General-in-Council is also empowered to make regulations, having all the cogency of Acts, for the more backward parts of the country, the object being to bar the operation of the general law and permit the application of certain enactments only.

Bengal Judicial Department.

Sanderson, Sir Lancelot	Chief Justice.
Teunon, The Hon'ble Mr. William, I.C.S.	Puisne Judge.
Woodroffe, The Hon'ble Mr. John George, M.A., Bar.-at-Law.	Ditto.
Mukharji, The Hon'ble Sir Ashutosh, Kt., C.S.I., M.A., D.L.	Ditto.
Richardson, The Hon'ble Mr. Thomas William, I.C.S., Bar.-at-Law.	Ditto.
Walmsley, The Hon'ble Mr. Hugh, I.C.S, ...	Ditto.
Chitty, The Hon'ble Sir Charles William, Bar.-at-Law.	Ditto.
Fletcher, The Hon'ble Mr. Ernest Edward, Bar.-at Law	Ditto.
Greaves, The Hon'ble Mr. William, Ewart	Ditto.
Syed Shamsul-Huda, Hon'ble Nawab Sir, K.C.I.E. ..	Ditto.
Chatarji, The Hon'ble Mr. Nalini Ranjan, M.A.; B.L. ..	Ditto.
Chaudhuri, The Hon. Mr. Asutosh, Bar.-at-Law ..	Ditto.
Newbould, The Hon'ble Mr. B. B.	Ditto.
Beacheroft, The Hon'ble Mr. Charles Porten, I.C.S, ..	Ditto

Bengal Judicial Department—*contd.*

Mitra, The Hon'ble Mr. Binod, Chandra, Bar.-at-Law.	Officiating Advocate-General.
Das, Satish Ranjan	Officiating Standing Counsel.
Kesteven, The Hon'ble Mr. Charles Henry	Government Solicitor.
Panton, The Hon. Mr. E. B. H.	Superintendent and Remembrancer of Legal Affairs.
Orr, John Williams, Bar.-at-Law	Deputy Superintendent and Remembrancer of Legal Affairs.
Ram Charan Mitra	Senior Government Pleader.
Hume, J. T.	Public Prosecutor, Calcutta.
Hechle, James Herbert	Registrar, Keeper of Records, Taxing Officer, Accountant-General, and Sealer, etc., Original Jurisdiction.
Remfry, Maurice	Registrar in Insolvency, Original Side.
Nalini Mohan Chatarji, Bar.-at-Law	Master and Official Referee.
Ryper, George	Dy. Registrar.
Bonnaud, William Augustus, Bar.-at-Law	Clerk of the Crown for Criminal Sessions.
Kirkham, Joseph Alfred	Secretary to the Chief Justice and Head Clerk, Decree Department.
Veitch, Harold Massyn, B.A., I.C.S.	Registrar and Taxing Officer, Appellate Jurisdiction.
Counsell, Frank Bertram	Deputy Registrar.
Paulit, Peter Sydenham	Assistant Registrar.
Grey, Charles Edward, Bar.-at-Law	Administrator-General and Official Trustee.
Bonnerjee, K. K. Shelly, Bar.-at-Law	Official Receiver, sub. *pro tem.*
Dobbin, F. K., Bar.-at-Law	Coroner of Calcutta.
Falkner, George McDonald	Official Assignee.
Bose, B.D., Bar.-at-Law	Editor of Law Reports.

Bombay Judicial Department.

Scott, The Hon'ble Sir Basil, Kt., M.A., Bar.-at-Law ..	Chief Justice.
Shah, The Hon'ble Mr. Lallubhai Asharam, M.A., LL.B.	Puisne Judge.
Batchelor, The Hon'ble Sir Stanley Lockhart, Kt., B.A., I.C.S.	Ditto.
Marten, The Hon. Mr. A. B.	Ditto.
Beaman, The Hon'ble Sir Frank Clement Offley, I.C.S...	Ditto.
Heaton, The Hon'ble Sir Joseph John, I.C.S.	Ditto.
McLeod, The Hon'ble Mr. Norman Cranstoun, B.A., Bar.-at-Law.	Ditto. (On furlough).
Abdeali Muhammadali Kaziji, The Hon. Mr.	Ditto. (Officiating).
Strangman, the Hon'ble Mr. T. J.	Advocate-General.
French, George Douglas	Remembrancer of Legal Affairs.
Milne, Robert Blair, M.A., I.C.S.	Acting Assistant Remembrancer of Legal Affairs.
Nicholson, Eustace Ferrers	Government Solicitor and Public Prosecutor.
Campbell, Henry.	Clerk of the Crown (On leave).
Tyabji, Faiz B., M.A.	Acting Clerk of the Crown.
Weldon, Walton Langford, Bar.-at-Law.	Reporter to the High Court.
Slater, John Sanders, B.A., Bar.-at-Law..	Administrator-General and Official Trustee.
Phirozshah Behramji Malbari, Bar.-at-Law	Officiating Prothonotary, Testamentary and Admiralty Registrar.
Hirjibhai Hormasji Wadia, M.A.	Master and Registrar in Equity and Commissioner for taking Accounts and Local Investigations, and Taxing Officer.
Mahomedbhoy Hajibhoy Lalji	Sheriff.
Allison, Frederick William, B.A., I.C.S.	Registrar, *Appellate Side.*

Bombay Judicial Department—*contd.*

Nasurwanji Dinshahji Gharda, B.A., LL.B.	Deputy Registrar and Sealer, Appellate Side.
Lambert, E. T.	Coroner. (On leave.)
Nunan, Dr. W.	Acting Coroner.
COURT OF THE JUDICIAL COMMISSIONER OF SIND.	
Pratt, Edward Millard, I.C.S.	Judicial Commissioner.
Hayward, Maurice Henry Weston, LL.B., Bar.-at-Law ..	Additional Judicial Commissioner.
Crouch, Henry Newton, LL.B., Bar.-at-Law	Additional Judicial Commissioner.

Madras Judicial Department.

Wallis, The Hon'ble Sir John Edward Power, Kt., M.A., Bar.-at-Law.	Chief Justice.
Abdur Rahim, The Hon'ble Mr., M.A.; Bar.-at-Law ..	Puisne Judge.
Oldfield, The Hon'ble Mr. Francis Du Pre, I.C.S. ..	Ditto.
Spencer, The Hon'ble Mr. Charles Gordon, I.C.S. ..	Ditto.
Trotter, The Hon'ble Mr. Victor Murray Coults ..	Ditto.
Seshagiri Ayyar, The Hon. Mr. T. V., B. A., B. L. ..	Ditto.
Sadasiva Ayyar, The Hon'ble Diwan Bahadur T. ..	Ditto.
Ayling, The Hon'ble Mr. William Bock, I.C.S.	Ditto.
Bakewell, The Hon'ble Mr. James Herbert, LL.B Bar.-at-Law.	Officiating Judge (Additional).
Kumaraswami Shastri, The Hon'ble Diwan Bahadur C. V.	.. Ditto.
Phillips, The Hon'ble Mr. William Watkin	Ditto.
Krishnan, The Hon'ble Mr. C., Bar.-at-Law	Ditto.
Srinivasa Ayyangar, The Hon. Mr. S., B.A., B.L. ..	Advocate-General.
Brightwell, Henry	Government Solicitor.
Ramesam Pantulu	Acting Government Pleader.
Osborne, E.R.	Acting Public Prosecutor.
Grant, P. R., Bar.-at-Law	Senior Law Reporter.
Odgers, The Hon'ble Mr. C. E., M.A., Bar.-at-Law ..	Administrator-General and Official Trustee.
Mackay, Charles Gordon, I.C.S.	Registrar.
Adam, John Collyer, M.A.	Crown Prosecutor.

Assam Judicial Department.

Abdul Majid, The Hon. Mr., B.A., LL.B., Bar.-at-Law .	Judge and Superintendent and Remembrancer of Legal Affairs, Shillong. (On leave).
Graham, John Fuller	Acting.
Sankey, G. C.	Judge, Assam Valley Districts, Gauhati.
Liddell, Henry Crawford	District and Sessions Judge, Sylhet and Cachar.
Purnachandra Basu	Additional Do.

Bihar and Orissa Judicial Department.

Chamier, The Hon. Sir Edward Maynard Deschamps, Kt.	Chief Justice.
Roe, The Hon. Mr. Francis Reginald, I.C.S. ..	Puisne Judge.
Atkinson, The Hon'ble Mr. Cecil, K.C.	Ditto.
Jwala Prashad, The Hon'ble Mr.	Ditto.
Ali Imam, The Hon'ble Sir Sayyid	Ditto.
Chapman, The Hon. Mr. Edmund Pelly, I.C.S.	Ditto.
Mullick, The Hon'ble Mr. Basanta Kumar, I.C.S. ..	Ditto.
Sultan Ahmad, Bar.-at-Law	Government Advocate.
Adami, The Hon'ble Mr., L.C.	Superintendent and Remembrancer of Legal Affairs.
Coutts, William Strachan, I.C.S.	Registrar.

Burma Judicial Department.

Twomey, The Hon'ble Mr. Daniel Harold Ryan, I.C.S., Bar.-at-Law.	Chief Judge, Chief Court; Lower Burma. (On leave).
Ormond, The Hon'ble Mr. Ernest William, B.A., Bar.-at-Law.	Officiating Chief Judge.
Robinson, The Hon'ble Mr. Sydney Maddock, Bar.-at-Law.	Judge.

Burma Judicial Department—*contd.*

Maung Kin	Officiating Judge.
Parlett, The Hon'ble Mr. Leonard Montague	Judge.
Young, The Hon'ble Mr. Charles Philip Radford, B.A., Bar.-at-Law.	Government Advocate. (On leave)
Saunders, Leslie Harry, I.C.S.	Judicial Commissioner, Upper Burma.
Sen, Purna Chundra, Bar.-at-Law	Administrator-General, Official Trustee, Official Assignee and Receiver, Rangoon. (On leave).
Sen, Surendra Nath, Bar.-at-Law	Officiating do.
Christopher, S. A., Bar.-at-Law	Government Prosecutor, Rangoon.
Darwood, Arthur John, Bar.-at-Law	Ditto. Moulmein.
Pattie, Earnestd/Gofrey, I.C.S.	Registrar, Chief Court, Lower Burma.
Millar, Edward	Registrar, Court of Judicial Commissioner, Upper Burma.

Central Provinces, Judicial Department.

Drake Brockman, Sir H. V., M.A., LL.M.; Bar.-at-Law, I.C.S.	Judicial Commissioner.
Batten, J. K., I.C.S.	First Additional Judicial Commissioner.
Stanyon, H. J., C.I.E., V.D., A.D.C., Bar.-at-Law	Second Additional Judicial Commissioner.
Jackson, Robert John	Registrar.
Parande, K. G.	Deputy Registrar.

N.-W. Frontier Province Judicial Department.

Rennie, F. P., C.I.E., I.C.S.	Officiating Judicial Commissioner.
Muhammad Akbar Khan	Registrar.

Punjab Judicial Department.

Rattigan, The Hon'ble Mr. Henry Adolphus Byden, B.A., Bar.-at-Law.	Chief Judge.
Shah Din, The Hon'ble Mian Muhammad, Bar.-at-Law.	Judge.
Smith, The Hon'ble Mr. H. Scott, I.C.S.	Do.
Chevis, The Hon'ble Mr. William, I.C.S.	Do.
Shadi Lal, The Hon'ble Rai Bahadur, Bar.-at-Law	Do.
Le Rossignol, The Hon. Mr. Walter Aubin, I.C.S.	First Temporary Additional Judge.
Leslie Jones, The Hon. Mr. Leycester Hudson, I.C.S.	Second Temporary Additional Judge.
Broadway, The Hon. Mr. Alan Brice, Bar.-at-Law	Administrator General and Official Trustee.
Gracey, S. W., B.A., I.C.S.	Legal Remembrancer.
Petman, Charles Bevan, B.A., Bar.-at-Law	Government Advocate.
Ferguson, John Alexander, M.A., I.C.S.	Registrar.

United Provinces, Judicial Department.

Richards, The Hon'ble Sir Henry George, Kt., Bar.-at-Law, K.C.	Chief Justice.
Knox, The Hon'ble Sir George Edward, Kt., LL.D., I.C.S.	Puisne Judge.
Banarji, The Hon'ble Sir Pramada Charan, Kt., B.A., B.L.	Ditto.
Piggott, The Hon'ble Mr. Theodore Caro, I.C.S.	Ditto.
Tudball, The Hon'ble Mr. William, I.C.S.	Ditto.
Walsh, The Hon. Mr. Cecil, Bar-at-Law, M.A.	Ditto.
Rafiq, The Hon'ble Mr. Muhammad, Bar.-at-Law	Ditto.
Ryves, The Hon. Mr. Alfred Edward, BA., Bar.-at-Law.	Government Advocate.
Bourdillon, Bernard Henry, I.C.S.	Registrar.
Daniels, Stanley Reginald, I.C.S.	Legal Remembrancer.
Porter, Wilfred King, Bar.-at-Law	Law Reporter and Secretary, Legislative Council.
Lalit Mohan Banarji	Government Pleader.

Court of Judicial Commissioner of Oudh—Lucknow.

Lindsay, Benjamin, I.C.S.	Judicial Commissioner.
Stuart, Louis, I.C.S.	First Additional Judicial Commissioner.
Rai Kanhaiya Lal, Bahadur	Second Additional Judicial Commissioner.
Cordeux, C. H., Bar.-at-Law	Temporary Registrar.
Nagendra Nath Ghosal	Government Pleader.

NUMBER AND VALUE OF CIVIL SUITS INSTITUTED.

Administrations.	Number of Suits Instituted.							Number of Suits the value of which cannot be estimated in money.	Total Number of Suits Instituted.	Total Value of Suits.
	Value not exceeding Rs. 10.	Value Rs. 10 to Rs. 50.	Value Rs. 50 to Rs. 100.	Value Rs. 100 to Rs. 500.	Value Rs. 500 to Rs.1,000.	Value Rs. 1,000 to Rs.5,000.	Value above Rs.5,000.			£
Bengal	95,061	293,349	125,489	129,971	11,954	6,958	1,246	841	664,869	6,529,982
Bihar and Orissa	34,665	72,842	28,736	32,310	4,001	3,175	764	122	176,615	4,175,120
United Provinces	16,322	82,576	51,572	49,966	6,346	5,288	1,190	38	213,298	5,766,281
Punjab	22,279	71,022	45,731	47,763	7,251	4,165	558	397	199,166	2,366,177
Delhi	542	2,173	1,372	1,782	352	348	76	14	6,659	207,772
North-West Frontier Province	3,828	11,149	6,318	6,363	782	424	51	16	28,926	309,846
Burma	3,642	22,517	15,819	24,069	2,672	1,898	352	1,427	72,396	1,505,919
Central Provinces and Berar	8,243	41,360	25,391	28,935	3,736	2,480	356	1	110,502	1,454,388
Assam	4,122	19,091	8,888	9,352	680	334	49	127	42,643	311,063
Ajmer-Merwara	1,703	4,073	1,802	1,260	78	72	9	5	9,002	51,980
Coorg	230	1,384	694	436	33	20	7	2	2,806	29,802
Madras	104,953	216,667	85,928	102,956	12,565	8,271	1,132	770	533,242	5,208,730
Bombay	13,279	60,781	33,696	41,078	5,918	4,439	962	2,264	162,417	3,603,925
British Baluchistan	636	1,782	552	675	85	62	11	124	3,927	33,449
TOTAL, 1915	309,505	900,766	431,983	476,916	56,453	37,934	6,763	6,148	*2,226,468	31,554,434
TOTALS 1914	286,704	835,694	390,885	438,122	53,845	36,247	6,633	7,030	2,055,160	34,083,673
1913	289,745	851,323	395,546	433,932	51,981	34,066	6,224	7,300	*2,070,117	28,255,410
1912	301,394	867,790	398,502	425,852	50,300	33,037	6,164	7,368	*2,085,407	26,783,601
1911	299,542	858,388	387,657	406,486	47,408	31,563	5,956	6,336	*2,043,336	27,350,585
1910	301,895	879,145	405,969	440,101	56,628	37,732	6,798	6,763	*2,135,031	32,340,338
1909	294,997	845,946	376,742	390,375	48,654	30,806	5,690	7,336	*2,000,546	28,958,056
1908	289,284	819,595	354,196	366,602	44,430	28,236	5,264	7,347	*1,914,954	25,955,219
1907	300,857	808,368	335,739	344,351	40,707	26,186	4,869	6,822	*1,867,899	22,459,065
1906	311,039	818,974	335,840	338,010	39,863	25,014	4,497	6,871	*1,880,108	22,370,186
1905	316,370	787,784	314,422	314,043	37,182	23,315	4,124	7,205	1,804,445	24,496,879

* Details not given of 42 Bombay suits in 1906; 56 Madras suits in 1906, 96 in 1907, 74 in 1908, 92 in 1909, 376 in 1910, 71 in 1911, 64 in 1912, 22 in 1913, and 28 suits in 1914; 370 Bengal suits in 1909; and 49 Delhi suits in 1913 and 84 in 1914.

THE INDIAN POLICE.

The Indian Government employ 196,304 Officers and men in the Indian Police. The total cost of maintaining the Force is Rs. 3,95 7,038. In large cities, the Force is concentrated and under direct European control; in the mofussil the men are scattered throughout each District and located at various Outposts and Police Stations. The smallest unit for administrative purposes is the Outpost which generally consists of 3 or 4 Constables under the control of a Head Constable. Outpost Police are maintained to patrol roads and villages and to report all matters of local interest to their superior, the Sub-Inspector. They have no powers to investigate offences and are a survival of the period when the country was in a disturbed state and small bodies of Police were required to keep open communications and afford protection against the raids of dacoits. It is an open question whether they are now of much use. Each Outpost is under a Police Station which is controlled by an officer known as a Sub-Inspector.

Distribution of Police.—The area of a Police Station varies according to local conditions. The latest figures available are:—

—	Average area per Police Station.	Average number of Regular Civil Police per 10,000 of Population.
	Square miles.	
Bengal *	126	4·8
Assam	616	5·3
United Provinces	127	7·7
Punjab	203	10·3
North-West Frontier Province	179	19·8
Central Provinces and Berar	242	8·6
Burma *	487	13·4
Madras	144	8·0
Bombay *	252	15·0

* Excluding the towns of Calcutta, Bombay and Rangoon. The figures include the Railway police, but not Military police.

Organisation of Police.

The Police Station Officer (the Sub-Inspector) is responsible for the investigation of all cognisable crimes, that is to say, all offences in which the Police can arrest without a warrant from a Magistrate, which occur within his jurisdiction; he is also held responsible for the maintenance of the public peace and the prevention of crime. From the point of view of the Indian Ryot, he is the most important Police Officer in the District and may rightly be considered the backbone of the Force.

Superior to the Sub-Inspector is the Inspector who holds charge of a Circle containing 4 or 5 Police Stations. His duties are chiefly those of supervision and inspection. He does not ordinarily interfere in the investigation of crime unless the conduct of his subordinates renders this necessary.

The Inspector is usually a selected and experienced Sub-Inspector. Each District contains 3 or 4 Circles, and in the case of large Districts, is divided into 2 Sub-divisions—one of which is given to an Assistant Superintendent of Police, a European gazetted Officer The Police Force in each District is controlled by a District Superintendent of Police, who is responsible to the District Magistrate (Collector or Deputy Commissioner) for the detection and prevention of crime and for the maintenance of the public peace, and, to his Deputy Inspector-General and Inspector-General, for the internal administration of his Force. Eight or ten Districts form a Range administered by a Deputy Inspector-General, an officer selected from the ranks of the Superintendents. At the head of the Police of each Province is the Inspector-General who is responsible to the Local Government for the administration of the Provincial Police.

Separate but recruited from the District Force is the Criminal Investigation Department, which is under the control of a specially selected European Officer of the rank and

standing of a Deputy Inspector-General. The Criminal Investigation Department, usually called the C. I. D., is mainly concerned with political inquiries, sedition cases and crimes with ramifications over more than one District or which are considered too important to leave in the hands of the District Police. It is a small force of Sub-Inspectors and Inspectors who have shown their ability and intelligence when working in the mofussil and forms in each Province a local Scotland Yard.

The larger Cities of Calcutta, Bombay, and Madras have their own Police Force, independent of the Inspector-General of Police, and under the control of a Commissioner and 2 or more Deputies. For Police purposes each city is divided into divisions; in Calcutta each division is in charge of a Deputy Commissioner of Police; in Bombay and Madras of a Superintendent, these officers being selected from the European ranks of the City Force. In Bombay, however, the Superintendents are Gazetted Officers. Each division is sub-divided into a small number of Police Stations, the station being in charge of an Inspector assisted by Indian Sub-Inspectors and European Sergeants.

The Supreme Government at Delhi and Simla keeps in touch with the Provincial Police by means of the Director of Criminal Intelligence and his Staff. The latter do not interfere in the *Local* Administration and are mainly concerned with the publication of information regarding international criminals, inter-provincial crime and Political inquiries in which the Supreme Government is interested.

Recruitment.—The constable is enlisted locally. Certain castes are excluded from service and the formation of cliques by filling up the Force from any particular caste or locality is forbidden. In some Provinces a fixed percentage of foreigners must be enlisted. Recruits must produce certificates of good character and pass a medical test. They must be above certain standards of physical development. The constable rises by merit to the rank of Head Constable and, prior to the Police Commission, could rise to the highest Indian subordinate appointments. Since 1906, his chances of promotion have been greatly curtailed; this has certainly lowered the standard coming forward for service in the Force in the lower ranks.

The Sub-Inspector, until 1906, was a selected Head Constable, but Lord Curzon's Commission laid down that Sub-Inspectors should be recruited direct from a socially better class of Indians. In most Provinces, eighty per cent. of the Sub-Inspectors are selected by nomination, trained for a year or 18 months at a Central Police School, and, after examination, appointed direct to Police Stations to learn their work by actual experience. It is too early to judge this system by results, but it has no doubt great disadvantages and undetected crime in India is increasing rapidly.

An Inspector is generally a selected Sub-Inspector. Direct nomination is the exception, not the rule.

The Deputy Superintendent, a new class of officer, instituted on the recommendation of the Commission, is an Indian gazetted officer and is the native Assistant to the District Superintendent of Police. He is either selected by special promotion from the ranks of the Inspectors or is nominated direct, after a course at the Central Police School.

Prior to 1893, the gazetted ranks of the Force were filled either by nomination or by regimental officers seconded from the Army for certain periods. In 1893, this system was abandoned and Assistant Superintendents were recruited by examination in London. On arrival in India, they were placed on probation until they had passed their examinations in the vernacular, in law, and in riding and drill. The establishment of Police Training Schools in 1906 has done much to improve the training of the Police Probationer, and selection by examination has given Government a better educated officer, but open competition does not reveal the best administrators and should be tempered, as in the Navy, by selection.

Pay.—The monthly salaries drawn by each grade of Police Officer are as follows:—

A constable draws from	.. Rs.	10 to 12.
A Head Constable draws	.. ,,	15 to 20.
A Sub-Inspector from	.. ,,	50 to 100.
An Inspector from	.. ,,	150 to 250.
Deputy Superintendents from	.. ,,	250 to 500.
Assistants from	.. ,,	300 to 500.
District Superintendents of Police from	.. Rs.	700 to 1,200.
Deputy Inspectors-General from	.. .. Rs.	1,500 to 1,800.
Inspectors-General from	Rs.	2,000 to 3,000

The appointments of Commissioner of Police, Calcutta, Bombay, and Madras, and all Provincial Inspectors-General, may be held by a member of the Indian Civil Service, if no Police Officer is found suitable for such appointments.

Internal Administration.—The District Force is divided into 2 Branches—Armed and Unarmed. As the duties of the armed branch consist of guarding Treasuries, escorting treasure and prisoners and operating against dangerous gangs of dacoits, they are maintained and controlled on a military basis. They are armed and drilled and taught to shoot after military methods. The unarmed branch are called upon to collect fines magisterially inflicted, serve summonses and warrants, control traffic, destroy stray dogs, extinguish fires, enquire into accidents and non-cognizable offences. The lower grades are clothed and housed by Government without expense to the individual. The leave rules are fairly liberal, but every officer, European or Native, must serve for 30 years before he is entitled to any pension, unless he can obtain a medical certificate invaliding him from the service. This period of service in an Eastern climate is generally admitted to be too long and the efficiency of the Force would be considerably improved if Government allowed both the officers and men to retire after a shorter period of service.

STATISTICS OF POLICE WORK.

The undesirability of attaching undue importance to statistical results as a test of the merits of police work was a point upon which considerable stress was laid by the Indian Police Commission, who referred to the evils likely to result from the prevalence among subordinate officers of an impression that the advancement of an officer would depend upon his being able to show a high ratio of convictions, both to cases and to persons arrested, and a low ratio of crime. The objection applies more particularly to the use of statistics for small areas; but they cannot properly be used as a basis of comparison even for larger areas without taking into account the differences in the conditions under which the police work; and, it may be added, they can at the best indicate only very imperfectly the degree of success with which the police carry out that important branch of their duties, which consists in the prevention of crime. These considerations have been emphasized in recent orders of the Government of India. Subject to these observations, the figures below may be given as some indication of the volume of work falling upon the police, and of the wide differences between the conditions and the statistical results in different provinces:—

Administrations.	Number of Offences reported.	Number of Persons under Trial.	Persons whose cases were disposed of				Persons remaining under Trial at the end of the Year.
			Discharged or Acquitted.	Convicted.	Committed or Referred.	Died, Escaped or Transferred to another Province.	
Bengal	331,640	(*a*)309,765	(*d*)99,282	196,056	3,846	204	10,375
Bihar and Orissa	107,736	110,988	50,585	53,590	1,830	100	4,883
United Provinces	223,301	336,197	188,188	134,024	6,068	289	7,678
Punjab	202,220	276,022	189,882	69,112	1,688	314	15,026
North-West Frontier Province.	23,762	35,903	19,764	15,188	434	14	503
Burma	114,788	192,658	64,945	114,615	2,070	2,352	8,676
Central Provinces and Berar.	38,508	55,414	29,586	20,984	1,980	60	2,804
Assam	43,516	36,693	(*e*)18,737	14,800	509	68	2,575
Ajmer-Merwara	7,439	9,781	3,760	5,547	29	64	381
Coorg	4,046	4,656	2,354	1,746	....	2	554
Madras	332,068	(*b*)471,098	211,424	241,940	4,554	153	13,025
Bombay	161,053	(*c*)227,671	93,920	122,328	2,159	1,087	8,167
British Baluchistan	6,599	11,978	6,569	4,240	....	103	1,066
Delhi	6,399	6,798	3,593	3,040	18	9	138
TOTAL, 1915	1,603,075	2,085,622	982,589	997,210	25,185	4,769	75,851
1914	1,634,224	2,120,472	1,031,374	992,922	23,554	4,949	67,631
1913	1,658,405	*b*2,141,362	1,051,888	987,592	22,459	4,735	74,052
1912	1,659,254	*b*2,132,813	1,053,657	977,267	21,650	4,313	75,765
1911	1,502,995	*b*1,960,679	966,783	897,786	21,173	3,906	70,832
1910	1,447,732	*b*1,884,951	922,379	872,208	21,029	4,439	64,677
TOTALS 1909	1,421,350	*b*1,856,219	914,500	854,667	22,174	3,349	61,502
1908	1,412,817	*b*1,844,207	897,462	860,065	24,535	3,625	58,496
1907	1,411,653	1,816,827	880,706	851,097	21,296	3,505	60,223
1906	1,404,777	1,805,707	864,493	860,486	22,776	3,911	54,041
1905	1,385,344	1,767,134	823,185	862,398	21,293	6,429	*f*53,825

(*a*) Includes 1 person remanded for retrial.
(*b*) Includes 2 persons ordered to be retried.
(*c*) „ 10 „ (10 handed over to Military Authorities) in 1915.
„ 25 „ (9 on dormant file, 16 handed over to Military Authorities) in 1914.
„ 30 „ (13 „ 17 „ „ to Military Authorities) in 1913.
„ 149 „ (139 „ 9 „ „ „ „ and 1 sent to Naval Authorities) in 1912.
„ 203 „ (171 „ 35 „ „ to Military Authorities) in 1911.
„ 128 „ (117 „ 11 „ „ to Military Authorities) in 1910.
„ 26 „ (10 „ 14 „ „ „ „ „ and 2 referred under Section 307, Criminal Procedure Code) in 1909.

(*d*) Excludes the commitment of one person quashed by the High Court.
(*e*) Excludes the commitment of 4 persons quashed by the High Court.
(*f*) Excludes 4 persons whose cases are pending by reason of their being insane.

PRINCIPAL POLICE OFFENCES.

CASES.

Administrations.	Offences against the State and Public Tranquility.		Murder.		Other serious Offences against the Person.		Dacoity.		Cattle Theft.		Ordinary Theft.		House-trespass and Housebreaking with intent to commit Offence.	
	Reported.	Conviction obtained.	Reported.	Conviction obtained.	Reported.	Conviction obtained.	Reported.	Conviction obtained.	Reported.	Conviction obtained.	Reported.	Conviction obtained.	Reported.	Conviction obtained.
Bengal	2,348	961	69	490	5,883	1,378	761	101	1,681	690	28,678	5,672	47,942	2,739
Calcutta Town and Suburbs.	119	56	2	24	800	194	8	1	45	37	4,832	1,422	1,244	283
Bihar and Orissa ..	890	324	63	258	2,807	619	191	32	1,748	634	20,271	4,792	24,215	1,713
United Provinces ..	1,649	789	249	831	9,068	2,966	915	166	5,590	1,206	40,286	6,523	77,688	4,992
Punjab	1,641	538	201	581	6,783	2,004	276	158	3,648	993	10,310	2,995	23,332	2,562
Delhi	17	10	..	8	145	37	1	..	26	6	505	183	440	67
N.-West Frontier Pro.	204	108	185	381	1,312	568	259	28	126	36	*901	*299	1,830	273
Burma	674	387	173	620	10,357	3,097	304	77	5,216	1,400	16,776	6,053	9,450	2,937
Rangoon	35	17	3	12	250	78	9	1	..	..	959	435	160	76
Central Provinces and Berar.	452	225	136	260	2,381	786	91	25	1,242	493	20,543	1,954	12,796	1,343
Assam	651	218	21	69	1,214	274	15	1	357	128	4,858	1,010	6,327	666
Coorg	14	5	4	5	48	24	..	..	19	9	163	71	38	11
Madras	1,846	722	129	769	5,944	1,638	715	95	5,224	1,482	22,188	5,443	18,552	2,665
Bombay	1,118	370	158	432	4,089	1,225	184	48	3,460	1,134	11,807	4,152	10,094	1,986
Bombay Town & Island.	40	23	4	17	714	298	1	..	..	..	5,209	2,518	1,401	329
TOTAL, 1915 ..	11,698	4,753	1,307	4,757	51,795	15,186	3,730	733	28,382	8,248	188,286	43,572	235,509	22,642
1914	11,706	4,740	1,484	4,624	52,522	15,324	2,770	457	27,329	7,926	178,824	39,664	216,817	21,296
1913	12,172	4,798	1,397	4,471	52,948	15,458	2,494	397	27,261	7,495	*174,727	*37,685	205,860	20,014
1912	12,414	4,716	1,308	4,430	52,337	14,763	2,512	413	27,254	7,171	176,091	38,356	199,480	20,178
1911	11,873	4,456	1,281	4,163	49,308	14,123	2,454	367	25,952	6,789	166,304	37,501	205,274	20,06[illegible]
TOTALS .. 1910	11,700	4,599	1,092	4,031	47,750	13,749	2,150	369	27,237	7,200	159,280	37,279	199,604	19,7[illegible]
1909	11,919	4,614	1,143	3,885	44,960	12,947	2,524	453	27,833	7,710	169,451	40,872	207,283	21[illegible]
1908	12,411	4,797	1,203	4,014	43,338	12,678	2,984	659	29,456	8,927	194,246	48,448	236,280	[illegible]
1907	12,181	4,454	1,106	3,603	42,921	12,506	2,360	428	27,809	7,492	178,898	41,173	212,299	[illegible]
1906	12,386	4,490	1,090	3,555	42,993	12,452	2,085	419	27,577	7,831	184,915	45,112	203,701	[illegible]
1905	12,313	4,456	1,048	3,386	43,328	12,920	2,276	434	25,847	7,038	174,091	40,401	194,232	[illegible]

* Including [illegible]

JAILS.

Jail administration in India is regulated generally by the Prisons Act of 1894, and by rules issued under it by the Government of India and the local governments. The punishments authorised by the Indian Penal Code for convicted offenders include transportation, penal servitude, rigorous imprisonment (which may include short periods of solitary confinement), and simple imprisonment. Accommodation has also to be provided in the jails for civil and under-trial prisoners.

The origin of all jail improvements in India in recent years was the Jail Commission of 1889. The report of the Commission, which consisted of only two members, both officials serving under the Government of India, is extremely long, and reviews the whole question of jail organization and administration in the minutest detail. In most matters the Commission's recommendations have been accepted and adopted by Local Governments, but in various matters, mainly of a minor character, their proposals have either been rejected *ab initio* as unsuited to local conditions, abandoned as unworkable after careful experiment or accepted in principle but postponed for the present as impossible.

The most important of all the recommendations of the Commission, the one that might in fact be described as the corner stone of their report, is that there should be in each Presidency three classes of jails: in the first place, large **central jails** for convicts sentenced to more than one year's imprisonment; secondly, **district jails**, at the head-quarters of districts; and, thirdly, **subsidiary jails** and "lock-ups" for under-trial prisoners and convicts sentenced to short terms of imprisonment. The jail department in each province is under the control of an Inspector-General; he is generally an officer of the Indian Medical Service with jail experience, and the Superintendents of certain jails are usually recruited from the same service. The district jail is under the charge of the civil surgeon, and is frequently inspected by the district magistrate. The staff under the Superintendent includes, in large central jails, a Deputy Superintendent to supervise the jail manufactures, and in all central and district jails one or more subordinate medical officers. The executive staff consists of jailors and warders, and convict petty officers are employed in all central and district jails, the prospect of promotion to one of these posts being a strong inducement to good behaviour. A Press Note issued by the Bombay Government in October, 1915, says:—"The cadre and emoluments of all ranks from Warder to Superintendent have been repeatedly revised and altered in recent years. But the Department is not at all attractive in its lower grades. The two weak spots in the jail administration at the moment are the insufficiency of Central Prisons and the difficulty of obtaining good and sufficient warders.

Employment of Prisoners.—The work on which convicts are employed is mostly carried on within the jail walls, but extra-mural employment on a large scale is sometimes allowed; as, for example; when a large number of convicts were employed in excavating the Jhelum Canal in the Punjab. Within the walls prisoners are employed on jail service and repairs, and in workshops. The main principle laid down with regard to jail manufactures is that the work must be penal and industrial. The industries are on a large scale, multifarious employment being condemned, while care is taken that the jail shall not compete with local traders. As far as possible industries are adapted to the requirements of the consuming public departments, and printing, tent-making, and the manufacture of clothing are among the commonest employments. Schooling is confined to juveniles; the experiment of teaching adults has been tried, but literary instruction is unsuitable for the class of persons who fill an Indian jail.

The conduct of convicts in jail is generally good, and the number of desperate characters among them is small. Failure to perform the allotted task is by far the most common offence. In a large majority of cases the punishment inflicted is one of those classed as "minor." Among the "major" punishments fetters take the first place. Corporal punishment is inflicted in relatively few cases, and the number is steadily falling. Punishments were revised as the result of the Commission of 1889. Two notable punishments then abolished were shaving the heads of female prisoners and the stocks. The latter, which was apparently much practised in Bombay, was described by the Commission as inflicting exquisite torture. Punishments are now scheduled and graded into major and minor. The most difficult of all jail problems is the internal maintenance of order among the prisoners, for which purpose paid warders and convict warders are employed. With this is bound up the question of a special class of well-behaved prisoners which was tried from 1905 onwards in the Thana Jail.

Juvenile Prisoners.—As regards "youthful offenders"—*i.e.*, those below the age of 15—the law provides alternatives to imprisonment, and it is strictly enjoined that boys shall not be sent to jail when they can be dealt with otherwise. The alternatives are detention in a reformatory school for a period of from three to seven years, but not beyond the age of 18; discharge after admonition; delivery to the parent or guardian on the latter executing a bond to be responsible for the good behaviour of the culprit; and whipping by way of school discipline.

The question of the treatment of "young adult" prisoners has in recent years received much attention. Under the Prisons Act, prisoners below the age of 18 must be kept separate from older prisoners, but the recognition of the principle that an ordinary jail is not a fitting place for adolescents (other than youthful habituals) who are over 15, and therefore ineligible for admission to the reformatory school, has led Local Governments to consider schemes for going beyond this by treating young adults on the lines followed at Borstal, and considerable progress has been made in this direction. In 1905, a special class for selected juveniles and young adults was established at the Dharwar

jail in Bombay; in 1908 a special juvenile jail was opened at Alipore in Bengal; in 1909 the Meiktila jail in Burma and the Tanjore jail in Madras were set aside for adolescents, and a new jail for juvenile and "juvenile adult" convicts was opened at Bareilly in the United Provinces; and in 1910 it was decided to concentrate adolescents in the Punjab at the Lahore District jail, which is now worked on Borstal lines. Other measures had previously been taken in some cases; a special reformatory system for "juvenile adults" had, for example, been in force in two central jails in the Punjab since the early years of the decade, and "Borstal enclosures" had been established in some jails in Bengal. But the public is slow to appreciate that it has a duty towards prisoners, and but little progress has been made in the formation of Prisoners' Aid Societies except by the Salvation Army.

Reformatory Schools.—These schools have been administered since 1899 by the Education department, and the authorities are directed to improve the industrial education of the inmates, to help the boys to obtain employment on leaving school, and as far as possible to keep a watch on their careers.

Transportation.—Transportation is an old punishment of the British Indian criminal law, and a number of places were formerly appointed for the reception of Indian transported convicts. The only penal settlement at the present time is Port Blair in the Andaman Islands. Under existing rules convicts sentenced to transportation for life, or for a term of years of which six have still to run, may be transported to the Andamans, subject to their being physically fit, and to some other conditions in the case of women. The sanctioned scheme contemplates five stages in the life of a male transported convict, the first six months being passed in a cellular jail, the next eighteen months in association in a jail similar to those of the Indian mainland, and the following three years as a convict of the third class kept to hard gang labour by day and confined in barracks by night. Having thus completed five years, a convict may be promoted to the second class, in which he is eligible for employment in the various branches of the Government services or in the capacity of servants to a private resident. After five years so spent, a well-behaved convict enters the first class, in which he labours under more favourable conditions, or is granted a ticket enabling him to support himself, with a plot of land. He may now send for his family or marry a female convict. The three later stages of this discipline have been in force for many years, and the first for some time, the cellular jail having been finished in 1906; but the associated jail for the second stage has not yet been built. Females are kept at intramural work under strict jail discipline for three years; for the next two years they are subjected to a lighter discipline, and at the end of five years they may support themselves or marry. Promotion from class to class depends on good conduct. The convicts are employed in jail service, in the erection and repair of jail buildings, in the commissariat, medical, marine, and forest departments, in tea-gardens and at other agricultural work, and in various jail manufactures. Ordinary male convicts sentenced to transportation for life are released, if they have behaved well, after twenty years, and persons convicted of dacoity and other organised crime after twenty-five. *Thags* and professional prisoners are never released. Well-behaved female convicts are released after fifteen years. The release is sometimes absolute and sometimes, especially in the case of dacoits, subject to conditions, *e.g.*, in regard to residence. In some cases released convicts prefer to remain in the settlement as free persons. The settlement is administered by a superintendent, aided by a staff of European assistants and Indian subordinates. The convict population of Port Blair amounted in 1915-16 to 12,425, consisting of 11,864 males and 561 females. The total population of the settlement was 17,331.

The variations of the jail population in British India during five years are shown in the following table:—

——	1916.	1915.	1914.	1913.	1912.	1911.
Jail population of all classes on 1st January	122,282	112,015	105,555	101,908	91,876	102,991
Admissions during the year	550,971	568,280	516,098	492,308	492,820	470,513
Aggregate	673,253	680,295	621,653	594,216	584,696	573,504
Discharged during the year from all causes	557,525	558,008	509,638	488,677	482,786	481,622
Jail population on 31st December ..	115,728	122,287	112,015	105,539	101,910	91,882
Convict population on 1st January ..	107,806	98,963	92,913	89,287	79,668	91,505
Admissions during the year	173,441	180,466	168,723	160,851	159,424	152,396
Aggregate	281,247	279,429	261,636	250,138	239,092	243,901
Released during the year	175,587	168,508	159,468	154,494	147,292	151,936
Transported beyond seas	1,535	1,486	1,319	1,566	1,382	1,138
Casualties, &c.	2,900	2,616	2,429	2,053	2,084	2,222
Convict population on 31st December.	102,208	107,811	98,963	92,913	89,287	79,668

The daily average number of prisoners, which had steadily decreased since 1908, rose slightly in 1913 to nearly the figure of 1911. The fall in 1912 was, however, largely attributable to the release of convicts and civil prisoners on the occasion of the Delhi Durbar. The increase in 1913 was distributed among all provinces except the United Provinces of Agra and Oudh and Coorg, in whichthe figures continued to show decreases.

More than one-half of the total number of convicts received in jails during the year came from the classes engaged in agriculture and cattle tending, over 144,000 out of 173,000 are returned as illiterate.

The percentage of previously convicted prisoners was 19·87 as against 19·67 in 1915 while the number of youthful offenders fell from 418 to 359. The following table shows the **nature and length of sentences** of convicts admitted to jails in 1914 to 1916 :—

Nature and Length of Sentence.	1916.	1915.	1914.
Not exceeding one month	42,669	45,101	43,685
Above one month and not exceeding six months..	66,388	69,346	66,113
„ six months „ „ one year ..	34,725	34,749	31,284
„ one year „ „ five years ..	23,962	24,755	21,989
„ five years „ „ ten „ ..	2,631	2,984	2,619
Exceeding ten years	345	242	250
Transportation beyond seas —			
(*a*) for life	1,197	1,309	1,308
(*b*) for a term	745	1,189	720
Sentenced to death	791	828	831

The total daily average population for 1915 was 102,342; the total offences dealt with by criminal courts was 193, and by Superintendents 179,112. The corresponding figures for 1914 were 95,260,192 and 176,277 respectively.

The total number of corporal punishments again showed a decrease, viz., from 352 to 327. The total number of cases in which penal diet (with and without solitary confinement) was prescribed was 7,324 as compared with 7,594 in the preceding year.

Total expenditure rose from £618,588 to £669,454, and total cash earnings increased from £109,851 to £127,689; there was, consequently, an increase of £32,768 in the net cost to Government.

The death rate increased from 17·84 per mille in 1914 to 18·35 in 1915. The admissions to hospital were somewhat higher, and the daily average number of sick rose slightly. The chief causes of death were tubercle of the lungs, dysentery and pneumonia.

Executive and Judicial Functions.

Throughout the history of political agitation in India, few matters have received more consistent attention than the question of the separation of the Judicial and the Executive functions. It has been one of the principal planks in the political platform of the National Congress since its inception in 1885, and has received the support of men of every shade of political opinion, from the most violent Extremist to the most conciliatory Moderate.

The question arises from the fact that the Indian Administration is based on the Oriental view that all power should be concentrated in the hands of a single official. Thus the District Magistrate is the chief revenue authority in the District, he controls local boards and municipalities, and directs the District Police, and, in fine, almost every department within the District is to a large extent under his influence. Sessions trials and Civil Justice fall within the province of the District Judge, but there remains under the District Magistrate's orders a body of subordinate Magistrates who dispose of simple criminal cases, and commit graver ones to the Sessions.

The opponents of the existing system are apt to rely largely on *ad captandum* phrases, like "the maintenance of judicial independence," and "a violation of the first principles of equity," rather than to specify exactly what points they really consider objectionable. It appears, however, that there are two main items in the District Magistrate's position to which exception is taken: one is that he is executive head of the District with direct control of the police, has the power of trying cases; the other is that the subordinate Magistrates, who try the great majority of cases, are directly under him, receive his orders, and rely on his good opinion for their promotion.

As regards the first point, the number of cases actually tried by the District Magistrate is exceedingly small. Sir Charles Elliott defending the existing system in 1896, said:—"There are many Districts in Bengal in which he does not try 12 cases a year." Since 1896 miscellaneous work has increased so much that even this small number has been greatly reduced. In fact, in Bombay to-day the majority of District Magistrates probably go through the year without trying a single case, and the difference would hardly be noticeable if the District Magistrate altogether lost his powers to try cases. The power is, however, sufficiently useful on occasions to outweigh the fear of harm arising from any abuse of that power on the rare occasions when it is used.

The more important item of the District Magistrate's power, that of control over his subordinate Magistrates, is attacked on the ground that he interferes with their "judicial independence." It is here assumed that control and interference are one and the same thing. If the District Magistrate said to his subordinate, "I consider this man guilty, and I expect you to convict him," there would be very real cause for complaint. But interference of this type does not occur, and is not alleged. It has been said that inspection is to the District Officer the very breath of his nostrils, and it is very largely to his continual inquisitiveness into the work of his subordinates, that the relatively high standard of justice attained by the subordinate magistracy in India is due. The points towards which his inquiries are most frequently directed are matters like want of sense of proportion in sentences; delays and irregularities in procedure: subservience to the interests of a local bar: prolixity in judgments and so forth. If control of the Magistracy were exercised only by the District Judge, who is practically tied to his bench, this supervision would be impossible, and the only check on the subordinate Magistrates would be occasional strictures passed by the Judge in appeal or on revision.

The opponents of the existing system would substitute for the present Magistracy trained lawyers, whose sole work would be that of stipendiary magistrates. There is no reason to suppose that the trained lawyer would be any less liable to the faults mentioned above. Nor is the Magistrate of to-day altogether untrained. The criminal law of India is to a very large extent independent of customary and case law, and is based on comparatively simple codes. Every official Magistrate is examined in these codes, and with a few years' experience, he is often a match in argument for all but the best of the local *vakils*. It is not, therefore, apparent that any gain would result from this change, while the increased charge to the public revenues would be enormous.

In 1899, the movement against the existing system culminated in a "memorial on the proposed separation of the Judicial and Executive duties in India," addressed to the Secretary of State, and signed by ten Indian gentlemen—mostly high judicial authorities. This memorial sets forth eight objections to the existing system, and it may perhaps be instructive to examine these seriatim, and to indicate with respect to each point the grounds on which an apology for the present system may be based:—

(1) "That the combination of judicial with executive duties in the same officer violates the first principles of equity."

If the same officer actually brought an offender to justice, and then tried him personally, the above theoretical objection might have considerable weight. In practice, however, as has been shown above, this does not occur; and the combination of functions in the District Officer is governed in such a way by criminal codes that the interests of accused persons are effectually safeguarded.

(2) "That while a judicial authority ought to be thoroughly impartial, and approach the consideration of any case without previous knowledge of the facts, an Executive Officer does not adequately discharge his duties, unless his ears are open to all reports and information which he can in any degree employ for the benefit of the District."

In reply to this it may be repeated that the District Magistrate, in fact, tries very few cases at all and it may be noted, moreover, that the law very largely restricts the possibility of a magistrate trying a case of which he has any previous knowledge. Further, it is surely to the public advantage that the police should be controlled by the District Magistrate, whose sole aim is or should be justice,

rather than by a police officer whose professional zeal might weigh hardly on the innocent suspect, and whose *esprit de corps* might shield a corrupt or unscrupulous subordinate from justice.

(3) "That Executive Officers in India, being responsible for a large amount of miscellaneous business, have not time satisfactorily to dispose of judicial work in addition."

By this it is presumably meant that the Executive Officer is at present overworked. This is quite possible, but the remedy would appear to lie rather in an increase of staff than in a re-distribution of functions, which in itself could not remedy the defect.

(4) "That, being keenly interested in carrying out particular measures, they are apt to be brought more or less into conflict with individuals, and therefore that it is inexpedient that they should also be invested with judicial powers."

It is implied here that the District Officer may use his judicial powers to enforce the executive measures in which he is interested. It is not unknown for a District Magistrate to issue orders to subordinates enjoining severe sentences in particular classes of cases and this may have reference to a particular executive policy (*e.g.*, such orders might be issued with regard to smuggling cases in a District where the illicit traffic in cocaine was rife). But it by no means follows that any injustice will result from such a line of action. Moreover, if this kind of "interference" by the District Magistrate were stopped, the only alternative left to Government, in cases where they wished specially to repress a particular type of crime, would be to amend the criminal codes by raising the minimum penalty for the offence, thereby depriving Magistrates of all discretion in the matter.

(5) "That under the existing system Collector-Magistrates do, in fact, neglect judicial for executive work."

It is not at first sight obvious how this can be urged as an objection to the fact that they do both types of work. It is true, as already stated, that the District Magistrate tries very few original cases, but it by no means follows that what judicial work he does, is done negligently.

(6) "That appeals from revenue assessments are apt to be futile when they are heard by Revenue Officers."

It is insinuated that all revenue matters should be decided by the operation of the weighty and complicated machinery of the Civil Courts. The idea of such a system in India, where three-quarters of the population are dependent on revenue-paying land, conjures up such a nightmare of confusion, that the imagination positively reels. The cost would be colossal. Nor is the objection really relevant. The Revenue Officer when hearing appeals from executive acts of his subordinates, is still an Executive and not a Judicial Officer, and what is here aimed at is a revision of the scheme of matters, which the law allows to be dealt with executively, rather than a separation of the two functions.

(7) "That great inconvenience, expense and sufferings are imposed upon suitors required to follow the camp of a Judicial Officer, who, in the discharge of his executive duties, is making a tour of his District."

This is perhaps one of the least convincing objections advanced against the existing system. In the first place a Magistrate in headquarters is likely to be at least as far from the homes of suitors, as he is in camp. The careful Magistrate, moreover, will arrange the hearing of cases at places which suit the convenience of parties as far as possible, and considerable trouble and expense are often saved to parties in this way. If all judicial work were done by Magistrates who had no other work, the number of Magistrates would be much reduced, and it is obvious that three resident Magistrates in a District must be much less accessible than a dozen or more who are continually moving about among the agricultural population. The only people who really are inconvenienced by the touring of a Magistrate are the pleaders.

(8) "That the existing system not only involves all whom it concerns in hardships and inconvenience, but also by associating the judicial tribunal with the work of the Police and of detectives, and by diminishing the safeguards afforded by the rules of evidence, produces actual miscarriages of justice and creates, though justice be done, opportunities of suspicion, distrust and discontent which are greatly to be deplored."

It is difficult to answer so general and indefinite an objection as this, except by flat denial.

It may, however, be said that if miscarriages of justice, due to this cause, were at all frequent they could never long remain hid, and much more would be heard of them than is actually the case. In 1896, Mr. Manomohan Ghose, a Bengali lawyer of repute, drew up a memorandum containing an account of 20 cases, which had come to his notice in the course of a long experience at the bar, and in which he alleged that injustice had resulted from the union in one officer of the judicial and executive functions. These instances were discussed by Sir Charles Elliott, formerly Lieutenant-Governor of Bengal, in an article in the *Asiatic Quarterly Review* for October 1896, and his analysis robs this evidence of nearly the whole of its weight.

These then are the main objections which have been raised against the existing system. It may well be asked why, if these objections are groundless, has there been such unanimity in the opinions expressed by reformers. There are perhaps two reasons which are mainly responsible. Firstly, it is beyond question that the proposed separation would everywhere weaken the Collector's position, and thereby that of the British Raj; and secondly, those who desire the separation belong almost without exception to the class from which lawyers are most largely recruited. The separation would not merely provide innumerable stipendiary billets, holders of which would have to be recruited from among the lawyers, but an immense increase of litigation would also result.

There is no doubt that over the greater part of India, the common people place a very real confidence in the Magistracy, and this confidence is largely based on the wise and effective control exercised by District Magistrates over their subordinates. Nor is there any doubt that the common people would view with the most intense alarm any proposal which would render the magistracy independent of this control.

The Laws of 1917.

BY RATANLAL AND DHIRAJLAL (*Editors of the Bombay Law Reporter*).

Once more has the trend of legislation in India been largely dominated by the great war and its concommittants. All important legislation which is contentious in its character remains deferred to the re-settling of normal condition of affairs at the advent of Peace. The advance of mankind on approved lines of progress is arrested and the cry of pressing reforms is drowned amidst the terrific clash of arms. Even the legislative mills are grinding slow—at times they seem to be almost at a standstill.

The Indian Steam Vessels Act.—This Act replaces the old Indian Steam-Vessels Act (VI of 1884), which was subsequently amended from time to time by as many as seven Acts. All these Acts have been consolidated into the new Act, and opportunity has been taken to improve the language and the arrangement of the sections of the existing Act. It will be seen that the operation of the Act is confined, as indicated by its title, to steam-vessels plying in Indian Inland Waters. The security of every such vessel is ensured by the provision that it shall not proceed on voyage or be used for service without a certificate of survey (s.3). The surveyor has the power to go on board any inland steam-vessel to inspect it and the equipments (s. 5); the owner or master of the vessel is liable to prescribed fees for the survey (s. 6). The survey results in a declaration stating (1) the time during which the engines and machinery of the vessel will be sufficient; (2) the limits beyond which the vessel is not fit to ply and (3) the number of passengers that it is fit to carry (s. 7). The certificate of survey ordinarily lasts for one year (s. 11), at the end of which it can be renewed on a fresh survey (s. 12). It is liable to be suspended or cancelled by Local Governments for sufficient cause (s. 13). The masters, serangs, engineers, and engine-drivers must have certificates of competency (ss. 26-31). If the vessel has been wrecked or materially damaged, if any loss of life happens on board the vessel or if it causes any loss or material damage to any other vessel, the master must inform the officer in charge of the nearest police station about it (s. 32). The Local Government thereupon constitutes a special Court (s. 33), which is empowered to inquire into any charge of incompetency, misconduct or negligence against the master, engineer or engine-driver (s. 34). The investigation can be set on foot by the Local Government *suo motu* (s. 35). If the investigation involves cancellation or suspension of a certificate, the Court has to appoint as its assessors two persons having experience in the merchant service or in the investigation of inland steam-vessels (s. 37). The result of the investigation is to be communicated to the Local Government in the shape of a report (s. 42). Every explosion on a steam-vessel is the subject of investigation by Local Governments (s. 44). The certificate granted to masters, etc., is liable suspended or cancelled by Local Governments on sufficient grounds (ss. 45-48). The protection of and carriage of passengers in inland steam-vessels is sufficiently safe- uarded by placing strict restrictions on carria of dangerous goods (s. 49). If they are surreptitiously introduced on board a vessel, they are liable to be thrown overboard by the master (s. 50). The detailed working out of this phase is secured by powers given to Local Government to make rules (1) for protection of inland steam-vessels from accidents (s. 52); (2) for the carriage of passengers (s. 53) and (3) for the protection of passengers (s. 54).

The Motor Spirit Duties Act.—An excise duty at the rate of six annas on each imperial gallon is levied on motor spirit manufactured in British India. If the duty is not paid in time, the manufacturers incurs liability to pay double the amount. The duty is made recoverable as if it were income-tax (s. 3). A countervailing duty of six annas on each imperial gallon of motor spirit imported into British India is imposed by Section 6.

The Indian Defence Force Act.—This is a temporary war measure, timed to last during the continuance of the war and six months thereafter. It is published in full elsewhere in this volume.

The Indian Army Suspension of Sentences Act.—Like the foregoing Act, this is a purely war measure. When a person subject to the Indian Army Act of 1911 is sentenced, the officer passing or confirming the sentence may direct that such person shall not be committed or dismissed from service until the orders of a superior military authority have been obtained. Where a sentence is suspended thus, after the offender has been committed he shall be discharged and the currency of the sentence suspended until he is again committed under the same sentence. He may be required to serve in a corps or department other than that in which he was serving when sentenced. The sentence can, in a proper case, be wholly remitted (s. 3).

The Destruction of Records Act.—Hitherto the destruction of Government records which had become useless through lapse of time or other causes was governed by Act III of 1879. It was found defective. There was no provision for the destruction of documents lodged with the Registrar of Joint Stock Companies under the Registration of Societies Act, 1860, the Provident Insurance Societies Act, 1912, the Indian Life Assurance Companies Act, 1913, and the Indian Companies Act, 1913. The present Act enables certain specified authorities to make rules for the disposal, by destruction or otherwise, of such documents as are not of sufficient public value to justify their preservation (s. 3).

The Indian Tariff Amendment Act.—This Act has been enacted to obtain increased revenue for the Government of India, from certain customs duties. The duty on silver plate, silver thread and wire and silver manufactures of all sorts has been uniformly raised to 10 per cent. *ad valorem*; whilst the special tariff rate of 3½ per cent. applicable to cotton piece-goods has been raised to the general 7½ per cent. rate. The rates of export duties on raw jute and jute manufactures have been doubled, that is, it now stands at Rs. 1-4 to Rs. 4-3 on a bale of 400 of raw jute; and at Rs. 20 to Rs. 32 on a ton of jute manufactures.

The Indian Income-tax (Amendment) Act.—Section 18 of the Income-tax Act of 1886 enabled the Collector to invite a person chargeable to income tax to submit a return of his income, but it was optional with the person to make the return: and the non-compliance was not saddled with any penalty. A new section (S. 14A) has accordingly been added to the Act, 1886, which enables the Collector to serve a written notice on a person requiring him to furnish a return setting forth the income accruing him during the preceding year. Failure to give the information is penalised with a fine which may amount to ten rupees for every day during which default in furnishing the return continues.

The Super-Tax Act.—The Super-tax, which is in the nature of an enhanced income-tax on large incomes, is levied on a graduated scale. It leaves untouched incomes falling below Rs. 50,000 a year which are only liable to pay the ordinary income-tax of one anna in the rupee. The first fifty thousand rupees of taxable income is liable to one anna; the second fifty thousand, 1½ annas; the third fifty thousand, 2 annas; the fourth fifty thousand 2½ annas; and all taxable income over two lacs of rupees is amenable to a Super-Tax of three annas in the rupee. This together with the income-tax makes four annas in the rupee on highest incomes. Companies and firms are chargeable to the tax on such portion of their income as has not been distributed in dividends or in payments to the members of the firm. The new provision embodied in S. 14A of the Indian Income-Tax Act (above referred to) is made applicable to the Super-Tax Act.

The Indian Bills of Exchange Amendment Act.—The only change which this Act purports to make is to introduce the words "acceptance or" before the word "payment" in s. 2 of the Indian Bills of Exchange Act, 1916. The object is to excuse delay in the presentment for payment of Bills of Exchange payable outside British India when the delay in making such presentment is caused by circumstances arising out of the war.

The Indian Army (Amendment) Act.—A new section (52A) has been added to the Indian Army Act, 1911, whereby in the case of prisoners of war whose pay and allowances have been forfeited under S. 50 but in respect of whom remission has been made under S. 52, the authorities may make proper provision for any dependants of such person out of his pay and allowances. Secondly, when a person has been convicted by a Court-martial, the Officer commanding may pardon him; or mitigate, remit or commute the punishment; or readmit him to the service when he is dismissed therefrom (S. 112).

The Indian Paper Currency (temporary amendment) Act.—As a war measure, this Act is enacted for temporary purpose. The maximum of reserve coin and bullion securities which stood at "one hundred and forty millions" has now been raised to "two hundred millions." The maximum of the said securities which are not securities of the Government of India is raised from "forty millions" to "one hundred millions".

The King of Oudh's Estate Validation Act.—It is a purely private Act meant to validate certain arrangements made by Government to administer the estate of the King of Oudh and certain trust funds appertaining the same.

The Freight (Railway and Inland Steam-Vessels) Act.—To meet the scheme of taxation laid down in the speech of the Financial member in presenting financial statement of the Government of India for 1917-18, it was found necessary to obtain as a war measure an additional revenue of about £500,000 from goods traffic. This Act is meant to give effect to the purpose; it is the fifth Act enacted levying extra taxes to meet the situation created by the war in this country. A tax of one pie is imposed on every railway maund of coal, coke and fire-wood; while in the case of all other goods, a general tax of two pies to a maund is levied. It is designed to be collected by means of a surcharge on freight by the administration of the railway and the owners of inland steam vessels. Its existence is now made familiar by the additional small charge of "W. tax" on every goods receipt or bill of lading.

The Prevention of Cruelty to Animals (Amendment) Act.—Any legislative measure that tends to alleviate the sufferings of dumb creatures is beneficent in its purpose and is sure to command the approval of all men. The object of this Act is to suppress the barbarous practice of flaying goats partially; that is, the head and neck while the animal is still alive. If any person is found to be in possession of such a skin, he is liable to be punished with fine which may extend to one hundred rupees (S. 5A). But it is very often difficult to establish the offence. A section, therefore, is added which creates a presumption of the offence against any person found in possession with the skin of a goat, with a portion of the skin of the head attached to it; and draws the presumption that the goat was killed in an unnecessarily cruel manner and that the person in possession of such skin had reason so to believe, until the contrary was proved.

The Indian Registration (Amendment) Act.—When a document has been presented for registration by a person not only empowered to present it and has been registered, such registration has been declared by the Privy Council (*Jambu Pershad* v. *Muhammad Aftab Ali* (17 Bom. L. R. 413) to be invalid. This Act adds a new Section (23A) to the Registration Act of 1908, whereby a person claiming under such a document may get it re-registered within four months from his first becoming aware that the registration was invalid.

The Patna University Act.—This Act deals with the incorporation of a new University at Patna. The Act first of all creates the University as a Corporation sole (S. 3). Its Chancellor shall be the *Lieutenant*-Governor of Bihar and Orissa for the time being. He is the head of the University and shall when present preside at the convocation for conferring degrees. With him rests the decision whether a person

has been duly elected as a member of the Senate or the Syndicate (S. 5). The Vice-Chancellor is the head of the executive (S. 6). The Senate is to consist of members numbering from 60 to 75. Of these, fifty are to be elected by the bodies specified in the section; the rest to be filled up by nomination. Besides these, the Vice-Chancellor, the members of the Executive Council of the Lieutenant-Governor of Bihar and Orissa, the Chief Justice of the Patna High Court, the Bishop of Chota Nagpur, the Director of Public Instruction and the principals of all Colleges teaching up to a degree are *ex-officio* fellows. The powers of the Senate are defined in S. 6. The Syndicate is to consist of 14 ordinary members, in addition to the following *ex-officio* members: the Vice-Chancellor; the Director of Public Instruction; and the principals of the Patna and the Ravenshaw Colleges (S. 8). The admission of educational institutions as Colleges is provided in S. 9. The appointments to the University Staff are to be made by the Chancellor on the recommendation of the Syndicate and the Senate. (S. 12). The rule-making power is given by S. 14. The Schedules give the names of the ordinary fellows of the first Senate and the ordinary members of the first Syndicate.

The Government Savings Banks (Amendment) Act.—Before the passing of this Act, the Post Office used to pay Savings Banks Deposit of less than Rs. 1,000 in amount to the heirs of the deceased depositors without the formality of obtaining Probate, letters of administration or succession certificate. The limit of that amount is now increased to Rs. 3,000.

The Post Office Cash Certificates Act.—The Post Office Cash Certificates issued as a part of the Indian War Loan of 1917 contain a printed direction: "Not transferable except with the permission of the Post-master General." This direction goes against the general law as to the transfer of actionable claims contained in S. 130 of the Transfer of Property Act of 1882. The prohibition as to transfer is therefore legalised. (S. 2). An exception has, however, been made in those cases where the Cash Certificates form part of the estates of deceased persons, in which case payment of the sum due on them may be made in the manner provided in the Government Savings Banks Act, 1873. (S. 3).

The Indian Paper Currency (Temporary Amendment) Act.—The maximum limit for the issue of currency notes against British Treasury Bills was fixed by Act XI of 1917 to 30 crores; it has now been raised to 42 crores (S. 2). Provision has also been made to legalise the issue of currency notes of one rupee and two-and-half rupees (SS. 4, 5, 7 and 8). An amendment has been made in S. 19 of Act II of 1910, whereby the Gold reserve need not be confined to the gold bullion held by the Secretary of State in the United Kingdom or the Government of India in India or in the course of transmission from the former to the latter, but may also include gold held in any of the British Dominions or in transit between a British Dominion and India.

The Transfer of Ships Restrictions Act.—The British Ships (Transfer Restriction) Act of 1915, as extended in 1916, prohibits the transfer or mortgage of British ships or shares therein to foreign-controlled companies. This prohibition is now applied to British ships registered in India under the British Merchant Shipping Act of 1894 (S. 3). Unlike other war legislation, this Act is to remain in force during the continuance of the war and three years thereafter (S. 1 (2)).

The Indian Trusts Act (Amendment) Act.—The Bombay Central Co-operative Bank, Limited, is the only Co-operative Bank in India, in which the Secretary of State for India in Council has guaranteed payment of interest at the rate of 4 per cent. per annum on the issue of debentures up to the value of three times its paid-up share capital. These debentures are included among the authorised securities by an amendment in S. 20 of the Indian Trusts Act, 1882.

The Gold (Import) Act.—This Act seeks to enact the provisions of the Gold (Import) Ordinance which was promulgated during an early part of the year as Ordinance III of 1917. Its main purpose is to enable Government to take possession of any gold imported into British India and such gold thereupon vests absolutely in His Majesty. The owner of the gold is to be paid at the rate fixed by the Governor-General in Council.

The Presidency Small Cause Courts (Amendment) Act.—Not long ago the Government of Bombay had to recall an appointment whereby they had appointed a Vakil of the High Court to the acting Chief Judgeship of the Presidency Small Causes Court in Bombay. The Presidency Small Causes Courts Act (XV of 1882) contained no provision to that effect. The disability attaching to the Vakils of the High Courts has now been removed. A Vakil or an attorney of any Indian High Court is now eligible for that post, temporary or permanent.

The Repealing and Amending Act and **The Sir Currimbhoy Ebrahim Baronetcy Act**—These Acts have no general significance to merit a detailed notice here.

The Transfer of Property (Validating) Act.—Originally this Act was introduced into the Council by a bill which was very wide in its extent and scope. It was brought forward to undo the effect of the Privy Council decision in *Shamu Patter* v. *Abdul Kadir* (14 Bom. L. R. 1034), where it was held that the word "attested" in S. 59 of the Transfer of Property Act, 1882, means the witnessing of the actual execution of the document by the person purporting to execute it. The effect of this decision is negatived by enacting that when an attesting witness has not seen the executant signing the deed himself, his attestation will not be invalid if he has before attesting received from the executant a personal acknowledgment of his signature to the deed. The provisions of this Act apply to deeds executed before the 1st of January 1915. The Act extends in the first instance to the United Provinces of Agra and Oudh; but it is capable of extension elsewhere in India by a notification published in the "Gazette of India".

Imperial Legislative Council.

The first meeting of the Imperial Legislative Council in the year 1917 was held at Delhi on the 7th February. The Viceroy opened the session with a somewhat detailed review of current affairs. Expressing his confidence in victory, he appealed for the further co-operation of the Council in excluding domestic differences from their debates. Touching upon the question of **indentured labour**, he gave his reasons for refusing leave to introduce the Bill entirely to abolish the system which was proposed by Pundit Madan Mohan Malaviya. He said, the question involved issues outside British India and the proposed Bill would prohibit any emigration from India under agreement in any country beyond the sea other than Ceylon and the Straits Settlement. Government were not sleeping over this matter. Special inquiries were being made in Ceylon and the Federated Malay States and a conference of the interests concerned would meet in London probably in May. The Colonies had shown the utmost readiness to co-operate in removing the features of the present system which were regarded as objectionable. Government desired to accelerate the consideration of the report of the **Public Services** Commission as much as they possibly could, so that the redress of pressing grievances was not postponed and that major questions among which the increased employment of Indians in the higher branches of the Public Services was one of the most important were not prejudiced or delayed. Government were considering the development of the constitution of India after the war, but if members studied the world position they would realise the intense pre-occupations of the British Cabinet. He announced that shortly a general **war loan** would be issued in India for which he appealed for strong support. Referring to enemy intrigues in India he said the campaign of intrigue was laboriously planned and carried out with such expense and determination had everywhere been foiled. The Persian Government at one time sorely pressed by German intrigue had throughout been assured that Great Britain was her best friend. As matters stood they had every reason to be satisfied with the political outlook. Turning to affairs in **Mesopotamia** he quoted the opinion of Sir Charles Monro that conditions were rapidly improving and the difficulties which arose in the earlier phases of the campaign had been gradually overcome. The health of the troops had improved in a marked degree and the army in Mesopotamia was now one of the best equipped of the many expeditionary forces serving in the field. It was proposed to make **military service** in India compulsory on all European British subjects between the ages of 18 and 41 whilst those between 41 and 50 would be compulsorily enrolled for local military service and youths between 16 and 18 for military training. They proposed also to enrol Indians in their own units for general military service in India for the duration of the war. The appointment of three representatives from India to attend the special War Conference in London marked a point in the history of India which was the beginning of a new chapter in its history under the Imperial flag.

The **Inland Steam Vessels** Bill was introduced and passed. The Law Member laid before the Council certain amendments in the rules for the conduct of legislative business which was referred to a Select Committee. The Education Member moved that the Bill to establish and incorporate the **University of Patna** be referred to a Select Committee. He dealt with the objections which had been raised to this Bill and assured members that Government did not propose to oppose alterations in the Bill. They were willing to consider any points which did not impair the efficiency of the organisation for the purpose for which it was to be created. The Bill was referred to a Select Committee.

The Council resumed its sitting on February 8th when Mr. Dadabhoy moved the following resolution: "That this Council recommends to the Governor-General in Council that the whole question of **Indian anarchism** be thoroughly investigated immediately by a mixed committee of officials and non-official representatives, both Indian and European." He maintained that the experience of the past few years demonstrated the futility of repression as a sole means of suppression. The motion was rejected without discussion. Rao Bahadur B. N. Sarma moved the following resolution: "That this Council recommends to the Governor-General in Council (*a*) that the cost of the construction of all new and original **public works** should be met from out of the capital account and not from the general revenues, and (*b*) that any saving in expenditure effected thereby be utilised towards primary education". He said, they should recognise the fact that they had to cut their coat according to their cloth. The revenues were limited and there were objects of a far more desirable character, for example, educational development and sanitation, which merited their first consideration. The Hon. F. C. Rose pointed out the difficulties in the way of accepting the proposal. Pundit Madan Mohan Malaviya said, the country felt that much more money had been put into bricks and mortar and into stone and timber than should have been done; it felt that much more should have been spent on building up the human organisation, on educating and developing the child, the school-boy and the school-girl than should have been put into brick buildings. The Hon. Sir Ibrahim Rahimtulla, whilst entirely sympathising with the main object of the mover that more money should be provided for the promotion of primary education, said that it appeared to him that the present time was very inopportune to have brought forward a direct recommendation of this character. The desire to relieve the present generation by distributing the liability over a number of years and the question of their capacity to borrow capital had to be very seriously considered. If the resolution were pressed to a division he would vote against it. Mr. Bhupendranath Basu agreed with Sir Ibrahim Rahimtulla. The Finance Member said the proposition was an abstract one in the present circumstances and he could not accept it. The resolution was withdrawn.

Rao Bahadur B. N. Sarma moved a resolution to strengthen the position, powers and procedure of advisory committees in dealing with **excise questions.** He said the resolution did not ask for total prohibition or for complete abstinence. It simply asked for steps to be taken immediately towards effecting reforms towards that desirable end. It asked the Council in other words to see that the principle of local option was given practical effect to a larger extent than had been found possible in the past. The principles underlying this resolution and those which the Government of India and the public had in view had been absolutely identical, namely, to check the evil of drinking completely. Mr. E. C. H. Walsh said that considerable reduction had been effected in the number of licenses for the sale of intoxicants. Further extensive reductions were not possible without encouraging resort to illicit practices and the use of other more noxious stimulants. Dr. Tej Bahadur Sapru supported the Resolution and Mr. Bhupendranath Basu said the recommendations before the Council were not so revolutionary in character or so impracticable of being put into execution as not to deserve very careful consideration and in his opinion they were principles which could be put into practice without great difficulty. Khan Bahadur Mian Muhammad Shaffi said the recommendations in his opinion needed no argument in their support. Pundit Madan Mohan Malaviya and Mr. Rangaswamy Ayyengar agreed. Sir George Barnes maintained that the development of the idea of local option could only follow on a healthy local opinion. He was afraid that in many parts of this country this opinion did not exist, and when a vigorous public opinion naturally did not exist it was impossible to create it artificially. It would, he was convinced, be a mistake to force the pace, and indeed there was no reason to suppose that Local Governments were not moving as fast as they reasonably could. The resolution was put to the vote and was defeated, 15 voting for it and 42 against.

The Council met again on the 9th February when Pundit Madan Mohan Malaviya proposed that the rules for the **conduct of legislative business** should be amended so as to provide that the Council should meet at least once in every quarter and once every week from December to March. Mr. M. B. Dadabhoy said he was entirely unconvinced as to the need for this alteration in their present arrangements. Mr. Wardlaw Milne said that it would be impossible for the commercial interests to obtain a representative who could arrange to spend one or two days each week throughout the four months of the year at Delhi. Khan Bahadur Mian Muhammad Shaffi said if this proposal was carried business men of experience and position as well as professional men of experience, ability and standing would be debarred from the opportunity of participating in the deliberations of the Council. Sir Reginald Craddock, Home Member, said Government were prepared to consider the expediency of approaching the Secretary of State with proposals which would have the effect of relaxing the restriction now imposed upon the Simla session with a view to making that session perhaps more interesting and more productive but he could not hold out a larger measure of comfort to the mover of the resolution and to those who had agreed with him. The Resolution was negatived.

The Council met again on the 16th February when Sir Reginald Craddock moved for leave to introduce a Bill to amend the Prevention of **Cruelty to Animals** Act for the purpose of punishing the horrible fashion of partially flaying goats alive. Mr. Bhupendranath Basu welcomed the measure. He said it had been known to them for many years that the evil practice of flaying goats alive for the purpose of getting the whole skin had been prevalent in Bengal, Bihar and in other parts of India. He welcomed the measure because it would tend to render the commission of such a crime more difficult. Mr. J. B. Wood introduced the King of Oudh's Estate Validation Bill. Mr. R. G. Lowndes presented the report of the Select Committee on the draft amendments in the rules for the conduct of the Legislative Business of the Council and moved that the amendments as modified by the Select Committee be passed. Pundit Madan Mohan Malaviya and Mr. B. N. Sarma opposed the motion which was supported by Mr. Bhupendranath Basu and agreed to.

Sir George Barnes, Member for Commerce, moved for leave to introduce a Bill to provide for the levy of an excise and customs duty of 6 annas a gallon on **motor spirit.** He said the measure was not intended for the purpose of raising revenue but to economise the use of petrol and to conserve the available supplies for military purposes. Whilst the consumption of petrol and benzine in India in 1915 was 4½ million gallons they estimated the annual consumption now at somewhere near 7 million gallons per annum. The Bill was purely a war measure and as such it was passed at the meeting.

Rao Bahadur B. N. Sarma Garu moved that this Council recommends to the Governor-General in Council that the **Madras Excise Revenue** should be wholly provincialised. He urged that the burden of taxation, both Imperial and Local, was heavier in Madras than the average in India and that they were allowed to retain a disproportionately small portion of their revenues; that the whole surplus during the last twenty years might well be claimed to be their money; that the wealth, agricultural or commercial, of the Presidency did not warrant or justify the drain; and that the Presidency was economically poor. Mr. K. V. Rangaswamy Ayyengar supported the Resolution on the ground that excise should be a wholly provincial revenue. Mr. Srinivasa Shastri dwelt upon the great needs of Madras. Sir Ibrahim Rahimtulla maintained that both in relation to the Madras Presidency and other parts of India the rate of taxation in Bombay was much higher. He maintained that until each province was made financially autonomous contributing on some equitable basis towards Imperial expenditure such demands would constantly be made on the Imperial Exchequer. Sir William Meyer, Finance Member, said the motion practically amounted to asking for a

recurring grant of £1½ million to be allocated to Madras although the Government of that Presidency had not asked for any such concession. Despite war conditions the Madras Government had increased their total expenditure, exclusive of outlay from grants from the Government of India earmarked for special purposes, from Rs. 6.6 crores in 1911-12 to Rs. 7¾ crores in 1917-18. The Resolution was negatived.

The Council resumed its sitting on the 21st February when His Excellency the Viceroy spoke on the subject of the creation of the **Indian Defence Force**. He said: "In time of war volunteering is a broken reed. The Government must have power to give orders and enforce them. This was impossible as the law stood, and we propose therefore the provisions of the Bill which will be placed before you. Moreover, as things stood on the basis of volunteering some men were offering their services, while others were getting off scot-free. This was clearly inequitable; there must be equality of sacrifice. To secure this, we propose compulsion for all coming under the definition of European British subject. In these circumstances it was useless to spend money on a military force which was bound to be ineffective under the conditions and nature of its existence." The Commander-in-Chief introduced the Bill and mentioned that the Secretary of State had indicated to the Government of India the lines on which India could render the greatest assistance to His Majesty's Government during the war. They were: Firstly, the release for service in the field of some of the units now employed in India on garrison duty, and their replacement by units locally recruited: Secondly, the development of local resources and industries with a view to rendering India more self-supporting as regards articles required by the troops in the field, thereby reducing demands from home and consequently releasing shipping urgently required elsewhere. The actual Defence Force Act is given under the Army Section (*q. v.*) so further details are not embodied here. We would only quote what the Commander-in-Chief said on the subject of the Indian Section of the Defence Force which is contained in the following passages:

"The Indian Defence Force will then come into being. It will consist of certain units composed of European British subjects between the ages of 16 and 50 who have been required to enrol under the compulsory provisions of the Bill, and of a certain number of other units composed of non-European British subjects between the ages of 18 and 41 who have enrolled themselves voluntarily. It is the intention of Government to retain the existing Volunteer organisation, but all existing corps, as well as any new corps or units that may be raised or constituted, will become corps or units of the Indian Defence Force.

"Corps of the Indian Defence Force will normally consist of active companies, reserve companies and cadet companies. Active companies will be composed of men of the general service class, namely, between the ages of 18 and 41; reserve companies of men of the local service class, namely, between the ages of 41 and 50; and cadet companies of youths between the ages of 16 and 18. Active companies will be liable for service anywhere in India. Reserve companies will be liable only to local service, while cadet companies will be liable to military training only.

"All persons enrolled will be classified according to their physical fitness. There will be several categories. One will consist of men fit for work in active companies, another of men fit for work in reserve companies, another, again, of those who are unfit for either of these categories owing to temporary causes, but who may become eligible later. Lastly, there will be a category which will consist of those whose physical incapacity is permanent, and who are therefore of no military value." This measure was cordially welcomed by all members of the Legislative Council and referred to a Select Committee.

Pundit Madan Mohan Malaviya presented the report of the Select Committee on the Bill further to amend the **Transfer of Property** Act of 1882. Mr. M. B. Dadabhoy moved the following resolution: "That this Council recommends to the Governor General in Council that the rules made under Section 2 (*f*) of the Defence of India (Criminal Law Amendment) Act, 1915, be revised so as to provide for the constitution in each province of special machinery to consider the cases of persons whose movements or actions it is proposed to control under those rules." He said the resolution had not been conceived in a spirit of opposition to Government: it was designed to make the working of the Act just and least irritating. The Resolution was supported by a considerable number of non-official members. The Home Member in replying said that the general disposition of the speeches "has been to take for granted that a large number at least of those whose liberty has been restricted are innocent and to take it for granted that action has been taken merely on the information of Police spies, or on other unchecked and entirely untested information. I will refer them to the Lahore trials. The Lahore trial showed exactly what has been taking place in the Punjab, and it is in the Punjab that a good number of such restrictions on liberty and internments in the villages, and so forth, have taken place. I will refer them also the Benares Conspiracy case, which shows that in other parts of India also there were ramifications of these conspiracies, and I will refer them to the speeches of His Excellency the Governor of Bengal. Now I do not think that there is any man in this country, any Provincial Governor, who has made more honest endeavours to take the public into confidence than His Excellency Lord Carmichael. He assured them that he had himself scrutinised the information that he had available from sources on which he could rely; that he had entered upon the action that he had taken with the greatest hesitation and reluctance; he asked for their trust, he asked for their confidence, and, yet, after he had expressed his trust, and had given, I say, all the information, the utmost information was was possible for a man to give in such circumstances, the next day you find newspapers saying that the whole thing

is a figment of the brain, and that a molehill has been made into a mountain. Is that, Sir, any encouragement for a Provincial Governor to take his people into confidence, and to ask them to sympathise with his difficulties and to believe him that he has done nothing that is not absolutely necessary for the safety of the country ?"

The resolution was lost by 39 votes to 14.

At the sitting of February 22nd, Mr. Srinivasa Shastri moved a resolution that the scope of the Commission appointed to consider the **Calcutta University** be extended to as to include the universities of Madras, Bombay, the Punjab and Allahabad. His reasons were that university matters had progressed much since the University Act was passed and that the other universities stood in need of expert guidance just as much as Calcutta. The Resolution was negatived. Dr. Tej Bahadur Sapru proposed that an executive Council be appointed for the **United Provinces** of Agra and Oudh. The Home Member stated that the subject had once more been referred to the Secretary of State whose decision was awaited. The resolution was withdrawn.

At the sitting on February the 28th the Commander-in-Chief presented the report of the Select Committee on the **Indian Defence** Force Bill. Several amendments modifying the Indian Section of the Defence Force were put and negatived, and the Bill was passed into law. In closing the debate the Commander-in-Chief said: "We have got to consider how the personnel can best be distributed and can best be equipped, and we should be failing if in our computation we reserved in India one gun or one man more than is necessary, or on the other hand, sent away more guns or more men than are required. We have got to take into consideration the balance of all these things and to distribute our resources according to what the exigencies are, and it is for that reason at the present time when our personnel and our material have to be employed to the best advantage, we feel that we cannot embark on questions, some of which really relate to very high Imperial policy and are visions into the future; we can only deal with the present and that is hard enough. I can tell you that every word that had been said here by my Hon'ble friends, to which I have listened with much interest, will be treasured up and will be retained, and whatever course will be taken at a future date, it certainly will be with needful thought to what you have told us so ably and so eloquently to-day."

The Commander-in-Chief introduced a Bill to authorise the suspension of certain sentences passed by **Courts-martial** under the Indian Army Act, 1911, and for other purposes. The Bill was passed. Mr. J. S. Wardlaw Milne moved for leave to introduce a Bill to amend the Indian **Bills of Exchange** Act, 1916. Permission was given. Rao Bahadur B. N. Sarma Garu proposed a resolution that the Imperial revenues should accept the burden of future extensions of **primary education** and that a scheme whereby it may be made universal, compulsory and free throughout British India within a period of 15 years, may be drawn up and sanctioned at an early date, and introduced as soon as possible after the termination of the war. The Education Member pointed out that a few years ago the late Mr. Gokhale introduced a Bill into the Council for a very limited purpose and that Bill was rejected. It was incumbent upon the mover of the resolution, who proposed a much wider scheme to show it was brought forward in such conditions as would warrant a change in this policy. The resolution was defeated by 34 votes to 21.

The Council then met again on Thursday, March the 1st, when the Finance Member Sir William Meyer introduced the Budget for 1917-18. This is fully discussed under section Finance (*q.v.*). The necessary Bills to carry out the Budget proposals were introduced.

The Council met again on the 7th March when the Indian Tariff Amendment Bill was introduced and passed. The Indian Income-tax Amendment Bill was introduced and passed. The Super-tax Bill was introduced and passed. Pundit Madan Mohan Malaviya moved the following resolution: "This Council recommends to the Governor General in Council that, in modification of the arrangement announced by the Hon. the Finance Member in paragraph 49 of his speech introducing the Financial Statement, the Government of India do offer to His Majesty's Government the entire amount of the Indian War Loan and 6 millions a year for the period of the war out of the proceeds of the additional taxation imposed this year and last year." The Resolution was withdrawn.

The Council resumed its sitting on the 10th March when the second stage of the Financial Statement was considered, members in charge of several departments introducing their respective heads of the Financial Statement. The most interesting of these was the distribution of the profits from the Wheat Scheme which were promised for the development of agriculture. The profits were allocated in the following proportions:—

	Rs.
Punjab will receive	10,70,000
United Provinces	7,75,000
Central Provinces	2,25,000
Bombay	1,50,000
North-West Frontier Province	50,000
And the Agricultural Adviser.	1,00,000

Mr. Srinivasa Shastri moved that "this Council recommends to the Governor General in Council that a sum of 80 lakhs be added to the provision made for **primary education**. The Finance Member said it was impossible for the Government to accept such a mandate in view of the special strain thrown upon their finances by the war. The motion was negatived.

The Council resumed its session on the 12th March when Sir Robert Gillan introduced the **Freight** (Railway and Inland Steam Vessel) Tax Bill. This was a war measure through which it was hoped to add £500,000 to the resources of the Empire. The **Indian Bills of Exchange** (Amendment) Bill was passed. Mr.

Srinivasa Shastri proposed that the Budget be reduced by three lakhs representing roughly the cost of the Simla exodus. The resolution was withdrawn.

The Council sat on the 20th March. The Indian Army (Amendment) Bill, giving greater discretion in dealing with sentences by Courts-martial was passed. The Finance Member introduced the Indian Paper Currency (Temporary Amendment) Bill explaining that this was an emergency enactment intended to give legality up to six months after the close of the war to the Ordinancewhich extended the powers of the Council in dealing with investments of the Paper Currency Reserve. The King of Oudh's Estate Validation Bill was passed. The Prevention of Cruelty to Animals (Amendment) Bill was passed. The Freight (Railway and Inland Steam Vessel) Bill was passed. The Indian Trusts (Amendment) Bill was introduced by Sir Fazulbhoy Currimbhoy to make the debentures of the Bombay Central Co-operative Bank trustee securities. Nawab Saiyed Nawab Ali Chaudhuri, Khan Bahadur, proposed that necessary steps be taken to draft a Bill for the establishment and incorporation of a **University at Dacca** and to introduce it into the Council at an early date. The Education Member said that there never had been any intention on the part of Government to withdraw from the position that the University at Dacca should be established as soon as circumstances permitted. After a slight breeze in which several members protested against the mover being allowed to criticise the action of various people without an opportunity of replying to him in the Council, the resolution was withdrawn. Pundit Madan Mohan Malaviya moved a resolution that no action should be taken on the recommendation of the Public Services Commission until reasonable opportunity had been given to the members of the Council to bring forward resolutions on the subject. The Home Member gave a full assurance that the Legislative Council would have every opportunity of expressing their opinions on this subject. The resolution was withdrawn.

The Council met on the 21st March, when the Finance Member presented the revised estimates of the Budget. The effect of these corrections was to raise the Imperial surplus by £171,000 and the Provincial surplus by £46,000. As regards the budget for next year the net effect of the changes was negligible. Pundit Madan Mohan Malaviya laid the report of the Indian **Registration (Amendment)** Bill on the table. Rao Bahadur B. N. Sarma proposed that the Council should recommend to the Governor-General in Council the urgent desirability of encouraging **boy scout** movement among Indian students. The resolution was accepted.

The Council met on the 23rd March when the general budget debate was taken up. As explained in previous issues of the Indian Year Book this is an omnibus debate and all the specific points are dealt with in the special measures brought forward. His Excellency the President in closing the debate said that it had been a notable session and that the members had every reason to be gratified with it. They had signified in no uncertain manner their desire to associate India with the sacrifices which the Empire had had to make in connection with the war and he was glad to think that the Government of India in making their offer of £100 millions to the Imperial Government did not misinterpret the wishes of the Council. It remained with it to secure the maximum response to India's War Loan. He read the following message from the Prime Minister of the United Kingdom :—

"I wish, on behalf of the British Government, to express to the Government and the people of India our most sincere gratitude for the magnificent contribution which India has just made to financing of the war. Coming in addition to the enthusiasm and loyalty manifested throughout India on the outbreak of war and to the invaluable military services since rendered by the Indian army, this gift is to us a moving proof that India shares wholeheartedly with the other subjects of the Crown in the ideals for which we are fighting in this war. That India should come forward of her own accord at this crisis and render such real and opportune assistance is not only a source of sincere satisfaction to His Majesty's Government, but must produce a better mutual understanding among all the races and peoples under the British Crown."

The Council resumed its session on the 5th September when the Home Member made the following statement :—

"The Government of India are prepared to recommend the Government of Madras to remove the restrictions placed on **Mrs. Besant** and Messrs. Wadia and Arundale under the Defence of India rules, if the Government of India are satisfied that these persons will abstain from unconstitutional and violent methods of political agitation during the remainder of the war. In taking this course the Government of India are actuated by the confident hope that the recent announcement of His Majesty's Government and the approaching visit of Mr. Montagu to this country will have such a tranquilizing effect on the political situation as to ensure the calm and dispassionate consideration of the difficult problems which are to be investigated during his stay in this country.

"The Government of India are prepared subject to the same conditions to take the same course in regard to other persons upon whom restrictions have been placed under these rules, merely by reason of their violent methods of political agitation."

His Excellency the President then made a long speech in which he alluded to the loss sustained by the Council by the appointment of Mr. Bhupendranath Basu and Sir P. D. Pattani to the India Office Council. Continuing, he said the policy of the Government was divided under the following three main heads :—

First.—To secure that the services of the Indian Army should not go unrecognised or unrequited and that rewards to them should hold the foremost place.

Secondly.—That we should endeavour to remove any grievances, either sentimental or material, which we found to exist.

Thirdly.—That we should define the goal of British rule in India and map out the roads leading to that goal.

He then touched upon the improvements which had been made in the condition of services in the Army and said that it was intended to institute a school for the education of the sons of Indian officers and it had been decided to admit Indians to British commissions in His Majesty's Army.

With regard to the status of the Indians in the Empire the Government policy was expressed in the following few heads:—

First, that the facilities for settlement accorded to Indians should not be less advantageous than those allowed to subjects of other Oriental nations.

Secondly, that facilities should be accorded to educated Indians visiting the Colonies for travel and study as apart from settlement.

Thirdly, that Indians who have already been permitted to settle should receive sympathetic treatment.

A great advance had been made in this most important question. He was glad to think that indentured emigration had been abolished. With regard to constitutional reforms there were two questions (1) What is the goal of British rule in India? and (2) What are the steps on the road to that goal? The endowment of British India as an integral part of the British Empire with self-government was the goal of British Rule and His Majesty's Government had now put forward in precise terms their policy in respect of this matter. With regard to the second point he had invited Mr. Chamberlain to visit India some time ago. Mr. Chamberlain was on the point of accepting this invitation when his resignation took place. Immediately on Mr. Montagu's assumption of office he expressed the hope that he would see his way to accept the invitation and the Cabinet had decided that he should accept. He urged that when Mr. Montagu arrived in India he should find a calm and dispassionate atmosphere and suggested policies carefully thought out and governed by sober arguments.

The Home Member introduced the Cinematograph Bill for regulating exhibitions by means of cinematographs. The Finance Member introduced a Bill to restrict the transfer of Post Office Five-Year Cash Certificates and to provide for the payment of certificates standing in the names of deceased persons. The Finance Member introduced the Indian Paper Currency (Amendment) Bill with the object of "continuing the Indian Paper Currency Amendment Ordinance, 1917, which was promulgated in April last: for the extension of the provisions of the existing Paper Currency Act in order to permit of gold being held as part of the Paper Currency Reserve, when held by us or on our behalf in any of the British Dominions, or in transit between a British Dominion and India in either direction: and for the issue of Re. 1 and Rs. 2½ notes. The Commerce Member introduced the Indian transfer of Ships Restriction Bill. The Home Member introduced the Usurious Loans Bill. In outlining the remedies for excessive usury in India he said there were three methods of dealing with this question:—

1. An amendment of the law limiting the rates of interest;

2. A law embodying the principles of (what is known as) "damdupat"; and

3. A Bill giving the Courts in certain instances equitable powers to reopen contracts between money-lenders and their debtors and to ascertain what return was equitably repayable for loans made.

"For reasons into the details of which it is unnecessary to enter at any rate at present, the Government of India have decided that the first two remedies proposed were neither suitable nor likely to be in any way effective and that the best chance of success lay in giving the Courts the equitable powers described in the third proposal."

The Council re-assembled on the 12th September when the discussion on the Usurious Loans Bill was continued. The Commercial Member introduced a Bill to amend the Government **Savings Bank** Act of 1873 the object being to increase the limit of Savings Bank deposits which might be paid to the heirs of deceased depositors without the formality of obtaining probate, letters of administration or succession certificates. The Home Member introduced the Presidency **Small Cause** Courts (Amendment) Bill to enable advocates to be appointed chief judges. **Mr. Muddiman** introduced the Repealing and Amending Bill to repeal useless matter in the statute book and to make amendments rendered necessary by recent legislation. The Sir Currimbhoy Ibrahim Baronetcy (Amendment) Bill was introduced, its object being to clear up an obscurity in the original Act. Pundit Madan Mohan Malaviya moved the adoption of the report of the Select Committee to amend the Indian **Registration** (Amendment) Bill which was passed. The Education Member presented the report of the **Patna University** Bill which will be found fully discussed under the section dealing with the Universities (*q v.*) Khan Bahadur Mian Muhammad Shafi proposed a resolution that the legislative and administrative system in the Punjab be assimilated into that of the Province of Bihar and Orissa. He said the principal points of difference were that Bihar and Orissa had a **High Court** and the officials were better paid. On this subject **Sir Michael O'Dwyer** Lieutenant-Governor of the Punjab, made a speech which was afterwards the subject of very considerable controversy. We therefore summarise it in some detail. Explaining the **reasons** which made him break the silence of four Simla sessions he said: "In the first place I must congratulate the Hon. Mover on the eloquence with which he has championed the claims of the Punjab to a broader legislative and administrative system; I congratulate him even more in spite of the criticisms which his Resolution has received on the eminently sane and practical manner in which he has pressed those claims. Eloquence is a common enough quality in India; common sense and sanity of judgment are unfortunately less common: both are essentially Punjab qualities. They are also pre-eminently British

qualities, and it is the common possession of those qualities—a heritage perhaps from the parent Aryan stock—that has led, ever since the destinies of the two were united, to mutual comprehension, mutual confidence and mutual co-operation between the British Government and the people of the Punjab. It is the fashion now a days in certain quarters to sneer at this mutual co-operation between the Government and the people. It is the fashion to picture the Government and the people as occupying hostile camps and to substitute agitation for co-operation. My own unhappy country furnishes a sad instance of what that policy has led to elsewhere. It should be a warning to us in India. In opening this session His Excellency the Viceroy appealed for mutual confidence and co-operation between the Government and the people in considering the problems before us. Let us see what that co-operation has already accomplished in the Punjab. Within 70 years it has raised the Punjab from one of the most backward and impoverished provinces of the Empire to one of the most prosperous and progressive. It enabled the Punjab to save India in the mutiny, and in the present war it has enabled the Punjab to achieve those splendid results not only for India but for the British Empire which we have heard recited to-day. With less than one-thirteenth of the population of the Indian Empire, the Punjab furnishes 60 per cent. of the Indian Army recruited in India. Though the drain on its manhood was already considerable at the outbreak of the war, it has responded to the King-Emperor's call with a promptness and a vigour which find no parallel in provinces that claim to be more advanced. Out of the 276,000 combatants recruited in India within the last three years, no less than 155,000 or nearly 60 per cent. were drawn from the Punjab—excluding some 40,000 non-combatants—leaving 120,000 from among the remaining 290 millions of the Empire."

Turning to what had been done in other parts of India he pointed out "We should be glad if those who are so fond of basing political claims on the loyalty of India and the sacrifices of the Indian army—which is mainly a Punjab army—would show their loyalty to the King Emperor and their sympathy for the province which is bearing the burden of sacrifice, not by words, however eloquent, but in some practical form, for instance, by active help in the recruiting campaign in those provinces which have hitherto made such an inadequate response to the King Emperor's call. Again, while our men of the Punjab are rallying in their hundreds of thousands to the service of their King and country, we find politicians in other provinces—I am happy to think we have none such in the Punjab—actually dissuading their fellow-citizens from joining the Indian Defence Force."

In a further reference to the difference between the attitude of the Punjab and of other parts of India he said: "Take another aspect of the case. While the Punjab soldier is shedding his blood in three continents in gallant resistance to the King Emperor's enemies we find he is receiving little recognition and little support from many of his fellow countrymen at home. And some of those gentlemen, forgetful of the security they owe to the British Navy and the British Indian Army, regardless of the terrible crisis through which the Empire is passing, callously discussing and even actively preaching the doctrine of passive resistance to the King Emperor's Government. Some of those men have, I believe, taken an oath to be faithful and bear true allegiance to His Majesty the King Emperor. By what subtle reasoning they reconcile their oath to their practice is a mystery which I will not attempt to solve. Anyhow that conception of loyalty is not understood by us in the Punjab. The Punjab has no use even for passive loyalty, still less for passive resistance. I only hope that those who preach those pernicious doctrines elsewhere will be guided by the advice given by His Excellency at the last meeting, and at least in their own interests will see fit not to extend their propaganda to a Province where disloyalty under whatever name we may disguise it has never taken and will never take root. . . . . The Punjab is not a Province of great wealth though thanks to the combined efforts of the administration and the people it enjoys a high degree of agricultural prosperity based on our wonderful irrigation system. We have little or none of the great industries of the foreign trade, of the great estates which bulk so large in the wealth of other Provinces; and yet our contribution far exceeds those of Provinces to which we are much inferior in wealth and population. In this respect the Punjab has given another instance of its self-sacrifice and loyalty. . . Again take the matter of materials. The provision of food-stuffs for our millions of troops in the field and the millions of workers in the United Kingdom has been one of the most serious preoccupations of the war. In this respect India is rendering valuable assistance but I believe I am within the mark in saying that two-thirds of the food-stuffs exported from India—excluding Burma—are drawn from the Punjab.

"The Punjabi like the British is perhaps lacking in that mysterious quality known as spirituality. If you were to try and explain to him what it means he would probably shake his head and say no doubt it was an excellent thing, an admirable virtue something like charity and like charity often used to cover a multitude of sins.

"He might even go so far as to compare it in the latter respect with that equally vague term Home Rule, which many of our politicians propound as a legitimate and constitutional ideal while many of our revolutionaries have put it forward as the goal they have in view when attempting to subvert the King's Government by the sword, the pistol and the bomb. If any Hon'ble Member doubts the accuracy of this statement which I repeat with a full sense of responsibility, I would refer him to the evidence and the judicial findings in the various Punjab Conspiracy cases, I would refer him to the files of the Ghadr newspaper and I would also ask him to verify his facts before recklessly launching an accusation of reprehensible untruth against the author of the statement.'"

In a final definition of the attitude of the Punjab he made the following remarks: "I fear I have wearied the Council with this long

narrative of what we have done, are doing and propose to do to honour the claims which have been established by the people of the Punjab, and especially the rural population. The measures are practical and substantial rather than showy and will perhaps appeal but little to the impatient politician. But in these days when we are in danger of being deafened by political harangues, of being blinded by the shower of political manifestoes, it is well occasionally to return to mother earth, to clear our minds of shams and illusions, and to ask ourselves what will all this noise and talk do for the man on the soil, the man behind the plough, the man whose life is a long drawn question between a crop and a crop. It is on him after all that the burden of empire mainly rests. In the Punjab I hope we have not been forgetful of him." The speaker was subject to continual interruption and at the close of his address many members were desirous of speaking. The Vice-President however adjourned the Council.

The Council met again on the 19th September. The Indian **Paper Currency** (Amendment) Bill was passed. The Indian **Transfer of ships** Restriction Bill was passed. The Indian Trust (Amendment) Bill was passed. With these preliminaries **Sir Michael O'Dwyer** made the following personal explanation: "I understand that certain remarks of mine at the last meeting of the Council on the resolution relating to the Punjab have aroused resentment in the minds of many honourable members. The views to which I gave expression were my own individual views, neither Your Excellency nor any member of the Government of India had any prior knowledge direct or indirect of what I was going to say. For what I said, therefore, the responsibility is solely and entirely mine, and I do not wish to disclaim it. In the debate in question the recognition of the progress made by the Punjab and in particular of its services in the present war was the real issue under consideration and in taking part in the discussion as I stated at the time, my intention was, while emphasising the particular services of the Punjab, to take the opportunity to stimulate other provinces to similar efforts. I therefore criticised certain manifestations of public opinion because I regarded them as harmful to recruiting and to the mobilisation of all our resources in the cause of the Empire. This I am sure the Council will agree with me should be and is the first thought in our minds at the present juncture. If however in my zeal to hold up the Punjab as a model to other provinces I criticised the attitude adopted by public men elsewhere in a manner which may have appeared invidious or has wounded the feelings of individuals I much regret that my remarks produced a result which I did not intend. I also deeply regret that any action of mine should have had the effect of disturbing that spirit of harmony and co-operation for which Your Excellency made such an eloquent appeal at the opening meeting of the session. Nothing was further from my thoughts than to transgress Your Excellency's wishes. Indeed, I would ask leave to repeat to-day, what I said at the last meeting that, quite apart from official obligations, the policy then announced by Your Excellency has my loyal and hearty support."

Mr. M. B. Dadabhoy proposed that election courts be established at all important centres in India to try election cases. The Home Member having explained the action which Government proposed to take the resolution was withdrawn.

The Council met again on the 20th September when a series of resolutions was moved dealing with points in connection with the **Public Services Commission**. Rao Bahadur B. N. Sarma moved "This Council recommends to the Governor-General in Council that the Government do not accept the recommendations of the majority of the Public Service Commissioners that the nature of British responsibility for the good governance of India requires the employment in the higher ranks of the Indian Civil Service and the Police departments of a preponderating proportion of British officers." Sir Hugh Bray speaking for the community of Calcutta demanded a continuance of those guarantees, a continuance that meant either a retention of such a measure of control by the British Government as would safeguard those interests or such representation of those interests in any new form of Government as would ensure their protection. Mr. M. E. Couchman speaking for Madras said that his objection to the Resolution was that if they removed the preponderance of British officers in the Civil Service and the Police they could at the present time and for some time to come only be replaced by Brahmins. He was no anti-Brahmin but a preponderating element of Brahmins in the upper ranks of these two services would be felt as a great injustice by the people of the other communities in Madras and probably in other provinces. In explaining the attitude of Government the Home Member said: "Up to the present, we have confined ourselves to a preliminary examination of the general points. On these points we have come to tentative provisional conclusions, and we are consulting Local Governments on them, in accordance with the policy which was deliberately decided in the papers laid before this Council last March. Indeed we could not come to any definite decision before hearing what Local Governments had to say; nor would it have been fair if we had done so until this Council had an opportunity of expressing its views. I do not think I need repeat what Sir Reginald Craddock said because many of the Councillors will remember it, but the undertaking given by him has been steadily kept in view and the time has come for Hon. members of the Council to play their part in expressing their views and I am very glad that they have done so. The Government, on the other hand, has listened to, and will consider, all that they have said or may have to say, with an open mind, and will give due weight to the arguments that they may adduce. It is, however, as I said before, the essence of the position that the Government should not have made up its mind at present on these points, and for that reason I am unable to accept the Resolution proposed by the honourable member. The resolution was withdrawn.

At the meeting of the Council on the 21st September Pundit Madan Mohan Malaviya moved the following resolution: "This Council

recommends to the Governor General in Council that the Government of India should move the Secretary of State to arrange that the examination for the Indian Civil Service should henceforth be held *simultaneously* in India and in England, successful candidates being classified in one list according to merit. The Home Member repeated his definition of the Government policy as pronounced at previous sittings and the resolution was defeated by 34 votes to 20.

The Council reassembled on the 24th September when Pundit Madan Mohan Malaviya moved the following resolution: "This Council recommends to the Governor General in Council that the Government of India should move the Secretary of State that, in case it be decided that a certain proportion of the Indian Civil Service officers recruited every year should be selected on the result of a competitive examination held for the purpose in India, that proportion should be not less than one-half of the total number of the posts included in the cadre of the Indian Civil Service and not one-fourth as recommended by the Public Services Commission." The resolution was negatived by 31 votes to 21.

Mr. Srinivasa Shastri moved: "This Council recommends to the Governor General in Council that the Government of India do represent to the Secretary of State that the **age limit** for the Indian Civil Service examination should not be reduced as recommended by the Public Services Commission. The Home Member again emphasised the attitude of Government and the resolution was withdrawn. Sir Ibrahim Rahimtulla moved the following resolution: "That this Council recommends to the Governor General in Council to give the required notice to the Managing Company of the **East Indian Railway** in accordance with the terms of the existing contract." The Commercial Member accepted the resolution which was adopted. Mr. M. A. Jinnah moved. "This Council recommends to the Governor-General in Council that a mixed committee be appointed to examine the working of the Indian Railways Act and to make their recommendations at an early date." The Commercial Member promised that the subject would be favourably considered at the close of the war and the resolution was withdrawn. Mr. M. A. Jinnah proposed that "This Council recommends to the Governor General in Council that the constitution of the **Central Recruiting Board** be modified so as to secure at least two Indian representatives of British India on the Board. The Finance Member, as President of the Central Recruiting Board, pointed out that it was a central and co-ordinating body, and in these circumstances he could not accept the resolution which was negatived by 33 votes to 18. Rao Bahadur B. N. Sarma proposed "This Council recommends to the Governor General in Council that pending the settlement of a detailed scheme of post-war reforms the administrative approval of the Government of India to legislative measures relating to local self-government and primary education be withheld, and where sanction has been already given to recommend to local Governments the desirability of suspending further action with regard to such measures." The resolution was withdrawn. Rao Bahadur B. N Sarma moved: "This Council recommends to the Governor General in Council that steps be taken with a view to extend the period for the entertainment of applications for recruitment for the Indian section of the **Indian Defence Force**." The Commander-in-Chief said that the Government of India fixed 6,000 as the maximum strength of the Indian portion of the Indian Defence Force with reference to their general military requirements and the numbers which they could train, arm, equip and find accommodation for. Their resources in the way of instructors, arms and equipment were not inexhaustible. He was therefore unable to accept the resolution which was withdrawn. Mr. Srinivasa Shastri proposed: "This Council recommends to the Governor General in Council that the Government of India do represent to the Secretary of State for India that no changes should be made in accordance with any of the recommendations of the Public Services Commission in the scale of salaries, or in the rules relating to the annuities fixed for members of the Indian Civil Service which would throw any additional burden on the revenues of India." The resolution was beaten by 30 votes to 17.

The Council reassembled on the 26th September when the **Gold Import** Bill was introduced providing for the acquisition by the Government of India of gold imported into British India. The Bill was passed. The Presidency Small Cause Courts Amendment Bill was passed. The Repealing and Amending Bill, and Sir Currimbhoy Ibrahim Baronetcy (Amendment) Bill were passed. The Home Member introduced the Bill to amend the Code of Criminal Procedure and the Court-Fees Act. Pundit Madan Mohan Malaviya moved that the report of the Select Committee on the Bill further to amend the **Transfer of Property** Validation Bill be taken into consideration. The Bill was passed.

His Excellency the President then closed the session in the following words: "Do not let us then be drawn aside by ephemeral incidents, which have lent themselves to misconstruction, from the great task which we all have in hand. Every interest and class will have an opportunity of putting their views before Mr. Montagu and myself, and provided these are consistent with the main principles of the policy formulated by His Majesty's Government, they will receive sympathetic consideration. Let me assure those non-official Members who represent European commercial interests, in this Council, that these important interests will of course be fully considered. Everyone, I am sure, Indian and European alike, recognises the historic position of the British community in India, and the debt which India owes to its enterprise and its energy. And no scheme of reform which was sound could be based on injustice to the British or to any other community. We want all the best minds and the co-operation of all classes of the community. I will not say more on this point, for does not the time itself appeal to us all, whatever our race, or creed or class, to co-operate in the spirit of Macaulay's lines:—

"Then none was for a party,
Then all were for the State?"

Bombay Legislative Council.

The Council met in Bombay in March when the Hon. Mr. Carmichael presented the revised **budget estimates.** His statement showed that expansion of revenue was the most satisfactory feature in the new budget. Whereas the revenue budget was for Rs. 7,51,00,000 it was estimated that the revenue would reach Rs. 8,01,25,000. The important variations are a decrease of 5¼ lakhs under Land Revenue and large increases under Stamps (6¾ lakhs), Excise (32 lakhs), Income-tax (13,85 lakhs), and Forest (5¼ lakhs). The position was strengthened by the fact that while on the expenditure side the total budgeted for was Rs. 7,54,10,000 it was anticipated that not more than Rs. 7,36,05,000 would be spent. Thus instead of closing the current year with a deficit of Rs. 2,50,000 it was expected that the revenue would exceed the expenditure by Rs. 65,20,000. Adding this to the opening balance of the year the estimated closing balance on 31st March 1917 was Rs. 2,42,21,000.

The Hon. Mr. Curtis introduced a Bill "to provide for increasing the number of elective members on **district local boards** and other matters." This was a Bill to make legislative provision for modifying the constitution of district local boards as circumstances admit, in accordance with the recommendations of the committee recently appointed in the Bombay Presidency to report on the extension of local self-government. The Bill provides for the increase of the proportion of elective members of such boards and the formation of special constituencies. It was framed to give early effect to such measures as need not be deferred pending the general revision of the Bombay Local Boards Act, 1884, which cannot be undertaken for the present. The Bill met with some opposition, though H. E. the Governor described it as a humble step forward along the path of local self-government. The Bill was read a first time.

The Council also considered a resolution of Mr. Patel recommending the constitution of village panchayats in select areas and the appointment of a mixed committee of officials and non-officials to suggest and advise Government on the necessary methods of detail to be adopted. The subject again meant an extension of **local self-government** and generally met with the assent of non-official members. The point of view of Government was explained by H. E. the Governor, who said that Government could not be expected to commit themselves to any definite line of action till they had received the report of Mr. Martin, an officer appointed some months previously to examine the whole subject of self-government. Mr. Martin's investigation was preliminary to a Bill Government proposed to introduce extending greater self-governing powers to various bodies in the Presidency, including district and taluka boards and municipalities.

At the July meeting in Poona the Budget was discussed, and a resolution passed recording the sorrow of the Council at the death of *Mr. Dadabhai Naoroji. The Bill* to amend the District Municipal Act, 1901, and the District Local Boards Act, 1884, was read a second time without opposition, after being modified in Select Committee. The Hon. Mr. V. J. Patel moved the first reading of a Bill to provide for the extension of **primary education** in the municipal districts in the Bombay Presidency other than the City of Bombay. The only important criticism levelled at the Bill by non-official members was against the retention in the Bill of Clause 18, the essence of this contentious clause being "that nothing contained in the Bill shall be deemed to affect the public revenues of the Bombay Presidency or to impose any charge on such revenues." It was explained that Mr. Patel was bound to admit this clause into his Bill in order to satisfy the Government of India. The difficulties of the clause were dealt with by several members. H. E. the Governor assured the Council that when the war was over this question of compulsory primary education would have to be seriously and comprehensively considered, not only by this Government, but all over India. Only if we educate our children, His Excellency said, shall we be able to raise an educated public opinion without which general administration is severely handicapped. When the Bill came before the Council again in December clause 18 had been decided and in other ways it had been considerably revised by the select Committee. After several amendments had been discussed this Bill—the first non-official member's Bill to be passed by any of the Provincial Councils—was passed into law, the second reading having been carried by 38 votes to 2

At the October meeting the Council was largely occupied with the Hon. Mr. Patel's Bill further to amend the Bombay **Medical Registration Act.** The main objects of this Bill were: Firstly, it was proposed to so alter the constitution of the Medical Council as to allow for a larger proportion of elected members by reducing the number of nominated members from 7 to 5 and by increasing the number of elected members from 6 to 8, secondly, to provide that persons trained in a Government Medical College, or school, holding a diploma or certificate that they are qualified to practice medicine, surgery and midwifery, or that they are qualified for the duties of a military assistant surgeon, hospital assistant or sub-assistant surgeon, should be eligible to be members of the Medical Council; and thirdly, to make clear the meaning of the words "infamous conduct in any professional respect occurring in Sections 7 and 8 of the Act." The Bill was thrown out by 24 votes to 20 after a long discussion.

At the July meeting the Hon. Mr. Paranjpye moved a resolution recommending that the **Modi script** be restored in the official correspondence and records of Government, and discussion on this was continued at the October meeting. The Hon. Mr. Seddon said that in the mass of opinions asked for by the Government there was a preponderance in favour of using Balbodh. *After passing* their orders finally in 1912, the Government reconsidered

the matter again in 1913, in 1915 and lastly in 1916. They went through the whole question again and again, and in the course of this consideration and reconsideration an enormous number of opinions was recorded and there was a vast preponderance of opinion in favour of Babodh. The resolution was carried by 18 votes to 17.

A considerable amount of time was devoted to a discussion of the rules for the **conduct of business.** In regard to Rule 21, which deals with select committees, an amendment recommended by the select committee provided that the member of the Executive Council, within whose province the subject matter of the Bill came, should invariably be a member of the select committee and that he should also be its chairman unless he chose not to be. The Hon. Mr. V. J. Patel moved an amendment that the member who introduced the Bill had a right to occupy this position of honour and should be ex-officio chairman of the select committee. The advocates of this latter view put their case on the ground of prestige and equality, urging that they should not have less privileges in this matter than members of the Executive Council and that there should be no distinction between officials and non-officials. The Advocate-General appealed to the members to look at the matter from another point of view. He declared that the distinction in this case was being made not between officials and non-officials, but between members of the Executive Council, who were responsible for the good government of the Presidency, and who had to carry out the measures of the Council, and members who had no such responsibility. His Excellency the Governor endorsed this view and added that it was a sound business proposition that a member of the Executive Council, who had all the resources of the Secretariat at his command, was better qualified to be a chairman of the select committee than the introducer of the Bill who would not be able to put his case strongly before the Committee if he were chairman. On a division, Mr. Patel found himself in a minority and his amendment was lost.

Another amendment was moved to put Government bills on the same footing as private members' bills in the matter of obtaining formal leave from the Council for the introduction of the same. The Advocate-General pointed out that this procedure was not necessary in the case of a Government bill, which was brought in after an elaborate inquiry. But that was not the case in regard to a private bill, which was apt to prove a very controversial one. However, even in the case of a private bill, he said, His Excellency the Governor could exercise his discretion and dispense with such special procedure, and, in fact, such discretion had been used in the case of two out of four private bills that had been brought in by private members. The amendment was lost.

As stated above, the Council met again in December when, in addition to the Education Bill, about 50 resolutions were down for hearing. The resolution which evoked most interest was one moved by Mr. Munmohandas Ramji, which recommended that the Circular of the Educational Department of the Government of Bombay of last June, preventing students from attending public meetings, should be revoked. This resolution and amendments to it were rejected.

Bengal Legislative Council.

The only important measure introduced in the Bengal Legislative Council was the **Ghee Bill,** which was the outcome of a Marwari agitation against the adulteration of ghee. In order to ensure a supply of pure ghee for the Durga pujas the Bill was hurriedly prepared and was passed through all its stages on September 4, in less than an hour. The Act renders it an offence punishable by substantial fines to manufacture sell or store ghee which is not wholly the product of cow's milk. The report of the Committee appointed by the Bengal Government to inquire into the charges levied by the Calcutta Electric Supply Corporation was presented and showed that the Committee, while they were of opinion that there was a sufficient margin in the profits of the Corporation to admit of a further reduction in the cost price per unit for lighting, deprecated any measure of coercion and rejected the proposal of a flat rate for lights and fans. Babu Ambica Charan Mazumdar moved a resolution in favour of an increase of municipalities. This was opposed by Sir Shamsul Huda who said that municipalities were already established in nearly all places of an urban character and stated that the Government were establishing many Union Committees for rural communities. Seven resolutions were introduced with a view to postponing the partition of Mymensingh and Midnapore and devoting the sum thus saved to sanitation or educational purposes. Resolutions were also moved for the provision of hostels in various places and for the establishment of Mahomedan Colleges in Dacca and Calcutta. Lord Ronaldshay presided for the first time over the Legislative Council on March 27 and was cordially welcomed. At the meeting held on August 7 Babu Surendra Nath Roy moved that the annual migration of the Government of Bengal to Darjeeling be discontinued. Sir Henry Wheeler opposed the motion on the ground that the work of Government was done more effectively in the hills, that the cost was not disproportionate to the gain, and that the migration did not involve the separation of the Government from the affairs of the Province,

The United Provinces Legislative Council.

At the meeting of the Legislative Council at Lucknow on 29th January the Lieutenant-Governor explained his connexion with Mr. Lionel Curtis and the work of the Round Table group and remarked that there was no conspiracy of any kind. His Honour said that the Government of India was of opinion, and he agreed with the Government, that Government officials should take no part in the work of the "Round Table." The Hon'ble Mr. Marris also made a personal explanation and accepted what His Honour had said. The Oudh Courts Amendment Bill was passed. The Government accepted, with certain minor reservations, a resolution relating to the appointment "as an experiment, of non-official chairmen of district boards in some of the districts in the United Provinces."

The Council met again on 26th February, when Mr. Chintamani moved that paragraph 143 A (b) of the Manual of Government orders relating to the appointment of subordinate judges and munsifs by recruitment, be amended so as to require of candidates a capacity to read and write **Hindi in the Nagri character** and not only Hindustani (Urdu) in the Persian character. The mover said that a knowledge of Hindi was required in the case of deputy collectors and he maintained that the convenience of a large number of people would be met if judicial officers were required to possess a knowledge of Hindi. Nawab Abdul Majid, in opposing the resolution, said its only object appeared to be a desire to keep alive the old Hindu-Moslem controversy. Urdu was the *lingua franca* of the country and the Mohamedans would oppose every effort to prejudice its position, particularly when there was no ground for attacking it. The Hon'ble Mr. Burn, on behalf of the Government, said that up to 1837 the language of these provinces had been Persian. Hindustani was then prescribed as the vernacular, and to this day there had never been any alteration made either by the Government or the High Court. He had consulted several authorities regarding the relative difficulty of deciphering the Persian and the Nagri character, and the general opinion was that Nagri presented the greater difficulty. Several Moslem members having opposed the resolution, Mr. Chintamani, in reply, said he did not think many of the remarks made were relevant to the debate. He regretted the heat imported into the debate as he did not think there was any reason for it. He would have withdrawn the resolution if there were any strong reasons expressed against it, but as that was not the case, he would not do so. The motion was put to the Council and lost.

Mr. Chintamani moved that these provinces would not be able to bear the increased cost of administration that would be entailed by the recommendations of the Public Services Commission. The President explained that the local Government could not go to the Government of India with such a protest, as there was no ground for believing that the U. P. would be saddled with the extra charges even if the recommendations were given effect to. The Government of India might perhaps meet the extra cost itself. The motion was lost by twelve votes to twenty-one.

At the meeting on the 27th February the Government accepted a resolution by Mr. Chintamani that no sub-divisions or tahsils in any district would be abolished or their areas redistributed without previous publication of papers relating thereto.

In introducing the **Revised Financial Statement**, on 13th March, Mr. Pim said that the actual receipts of 1916-1917 were much better than anticipated. The original estimates provided for an increase of 676 lakhs and an outlay of 680 lakhs, but the revised totals had the effect of raising the income to 692 lakhs, while the expenditure was 675 lakhs. The improvement was attributed to a good monsoon, active trade, easier prices and the excellent prospects of the *rabi* harvest. The Budget for 1917-18 placed the income at 695 lakhs and the expenditure at the same figure. Further increases were expected under the heads of excise, stamps and land revenue, but there would be a considerable decline under receipts from irrigation —the results of the smaller demand for water. A new grant of 4½ lakhs recurring had been made for the training of teachers, and the Government of India had just announced a grant of 2¾ lakhs to the province for agricultural improvements, the proceeds of the wheat scheme. A number of resolutions were moved by non-official members asking for reductions in the Police, Forest and other budgets, and the transfer of the amounts to education. The motions were lost.

At the meeting on 2nd April, Mr. Holms presiding, the Oudh Settled Estates Bill was discussed and passed. The United Provinces Medical Bill, the effect of which will be to give the U. P. Medical Council a larger number of elected members than any other council in India, was taken into consideration. Mr. Chintamani, in supporting the measure, bore testimony to the generous spirit in which the official members of the select committee had met their wishes, and said the Bill, when passed, would go before the country as the best Medical Act that any Provincial Council had passed. After some minor amendments the Bill was adopted and passed.

On 3rd April the Budget for 1917-18 was presented. Pandit Gokaran Nath Misra moved that the Council recommend to the Lieutenant-Governor that at least two posts of superintendents of police be filled by promotion thereto of deputy superintendents, that is to say, of Indians. After a debate, in the course of which the Government promised to appoint one deputy superintendent to be a superintendent, the resolution was put to discussion and carried by 19 votes to 17.

The discussion of the Budget took place on 11th April. Mr. Anand Sarup regretted the increase in excise revenue. Mr. Chintamani said the whole world was changing and despite what the Viceroy had said in Calcutta, he hoped the British Government would move faster than it had done. Referring to the Finance Com-

mittee, he said unless fuller use was made of it, it must be called a failure. Lala Madhusudan Dyal referred to the backwardness of these provinces in education. Mr. Sami Ullah Beg thought the money spent on education was inadequate and much more rapid progress was urgently necessary. His Honour Mr. Holms, in winding up the debate, associated himself with what had been said of Mr. Pim's work as Financial Secretary and repeated Mr. Pim's assurance that the suggestions made in the debate would receive consideration.

At the meeting on 17th July, the Raja of Jehangirabad welcomed Sir James Meston on his return to the province after his trip to England to represent India at the Imperial War Cabinet and the Imperial Conference. His Honour in a speech referred to the two great Councils and explained briefly what was India's share in their work and what they offered to India in return. Several resolutions were moved and lost.

The Council met again on 18th July, when Mr. Chintamani's resolution for an inquiry into certain alleged grievances of Indian students at Roorkee College was withdrawn after a lengthy debate. Lala Madhusudan Dyal's resolution urging an expression of Government's strong disapproval of the letter addressed recently by Mr. Stubbs, Collector of Bijnor, to some Vaishya gentlemen of that district regarding subscriptions to the War Loan was put to the vote and lost by 21 votes to 9.

At a meeting at Naini Tal on 1st October Munshi Narayan Prasad Asthana moved that a Bill empowering municipal boards to introduce free and compulsory education in municipal areas be brought forward. Mr. Keane suggested as an amendment that a committee of the members of Council be appointed to consider the desirability of legislation for the purpose of enabling municipal boards to make primary education compulsory in municipalities. The mover accepted the amendment which was put to the vote and carried.

The Council met at Allahabad on 12th November, when Mr. Chintamani moved the following resolution. That this Council recommends to the Lieutenant-Governor (1) to limit the duration of the Local Government's stay at Naini Tal to three months in the year and (2) to direct that heads of departments shall not migrate to the hills. Mr. O'Donnell opposed the resolution and pointed out the advantages of the system. The resolution was lost by ten for and twenty against.

At a meeting at Lucknow on 10th December Mr. Chintamani moved for leave to introduce the Oudh Courts (Amendment) Bill the object of which was to provide that not less than half the number of Judges in the Judicial Commissioner's Court should be members of the legal profession. The measure was opposed by Government and on a division was lost by 22 votes to 12. Mr. Chintamani next moved for leave to introduce the Oudh Civil Courts (Amendment) Bill to provide that the appointment of Judicial Commissioner in Oudh should be reserved for a barrister. The motion, after discussion, was lost by 22 votes to 11. Among other resolutions moved by Mr. Chintamani was one urging the Government to adopt a vigorous policy to check the ravages of plague during the expected epidemic. Colonel Mactaggart said they were doing everything possible. As a matter of fact money set apart by Government for fighting plague was lying idle because the people did not choose to ask for it. If anybody proposed a practical scheme on behalf of the people, the Government would be happy to consider it. The Council adjourned *sine die*.

Punjab Legislative Council.

There were four meetings of the Punjab Legislative Council during 1917, the November meeting which usually assembled at Simla, taking place this year at Lahore, chiefly in consequence of the difficulty of obtaining house accommodation for members at Simla. The legislative business transacted included the Punjab **Vaccination** Law (Amendment) Act, the **Simla House** Act and the **Habitual Offenders** Bill as well as several resolutions and interpellations of more than ordinary interest. At the opening meeting on March 13th, the Hon. Mr. O. F. Lumsden, Financial Secretary, presented the revised Financial Statement for 1917-18 (which showed an advance on the original estimates, the largest increases being under land revenue. After conserving resources on the expenditure side, the closing balance was shown as Rs. 39¼ lakhs better than the opening balance. The estimated income in the Budget was Rs. 4,79,88,000 plus Rs. 32,82,000 representing the net results of transfers between the Imperial and Provincial revenues. The expenditure was estimated at Rs. 5,09,94,000 leaving a surplus of Rs. 2¾ lakhs. Unallotted funds contributed about Rs. 30 lakhs to the Budget expenditure, which altogether provided for a considerable increase as com-

pared with the revised estimates of the current year.

A resolution by the Hon. Bakshi Sohan Lal proposing the establishment of an **Executive Council** for the Punjab at the close of the war was carried, the Local Government neither opposing nor supporting it. The Government also observed a similar attitude of neutrality with regard to a resolution moved by the Hon. Mr. Fazl Hussain, recommending that the representative of Punjab Mahomedans in the Supreme Legislative Council be elected and not nominated, and the resolution was carried, the Hindu members also not voting.

At the meeting held on April 24th, a resolution proposing that thirty years should be the ordinary term for land revenue settlements in the Punjab was keenly discussed, His Honour the Lieutenant Governor refuting the argument that Native States had long terms, and emphasising the fact that the selling value of land in the Punjab was three times that of other provinces. Government's offer to accept the resolution, if modified by excluding districts not fully developed, not having been accepted, the resolution was lost by the Chairman's casting vote, 13 voting for and 13 against the motion. The debate on the Budget which as a "prosperity budget" was the subject of universal congratulation to the Finance Member was resumed on the following day. The Lieutenant Governor in his summing up said that the income was Rs. 38 lakhs above and the expenditure Rs. 10 lakhs below what was anticipated, the year closing with a handsome surplus of Rs. 103 laks, instead of Rs. 55 lakhs estimated. For the coming year Government had boldly budgetted for an income of Rs. 513 lakhs and an expenditure of Rs. 510 lakhs, leaving a closing balance of Rs. 106 lakhs. Arms and agriculture, said His Honour, must be the Punjab's main industries. Agricultural improvements were receiving every attention and a determined effort was contemplated to reconcile education and agriculture. Referring to the political situation which he had discussed at last year's council, Sir Michael O'Dwyer said that in the three districts of the south-west Punjab in which serious disorders were caused two years ago, peace and harmony now reigned. There had been an abortive conspiracy to arouse anti-British feeling among Mahomedans, which was nipped in the bud last year. He condemned the Home Rule propaganda and pointed out the significance of the fact that the watchword of the Ghadr conspiracy on the Pacific coast was also Swaraj. His Honour also appealed for more recruits and larger support for the war loan to which the Punjab has since been the third largest contributor in India.

The chief business at the meeting on November 6th was the passing of the Punjab Vaccination Law (Amendment) Bill which was both simple and non-contentious. It extends the benefits of the Act of 1880 to notified areas, which were not in existence at the time of the original Act and which were anxious to apply the Act to themselves in the same way as Municipalities. In this connection it was stated by the mover the Hon. Mr. Lumsden, that this year Government were providing model forms to assist municipalities to frame bye-laws to meet local requirements. Two resolutions were proposed—one on the improvement of primary education, which was carried unanimously, the other urging that the Lahore Medical College professorships should not be restricted to the Indian Medical Service. The proposal in an amended form was carried, official members not voting.

A special meeting of the Council was also on December 21st at which two bills were brought forward, one for restricting the movements of habitual offenders in the Punjab and for requiring them to report themselves (this was referred to a select committee) and the other for regulating the rents and occupation of houses in Simla during the period of the war (passed). The first of these Bills proposed a new departure, in conformity with special measures initated by the local government since January to control criminal tribes. The Hon. Mr. Craik, the mover showed how the security provisions of the Indian Penal Code provided no effective or practical method of dealing with habitual offenders. The Bill was drafted two years ago and received with a chorus of approval both as regards its principles and its details and was amended in the light of the opinions of the Government of India and the official as well as non-official members of this Council.

The second Bill which passed into law aimed at affording facilities in the matter of house **accommodation in Simla** to the Government for the purposes of the war and as such was purely a war measure. The Hon. Mr. Lumsden, the mover, explained the necessity for Government interference as well as the latitude provided for its operation, the rents fixed being based on the rates of the year 1917; also while pleasure-tenants were to be kept out the tenants of that year were exempted, whether they visited Simla on duty or not. The debate on the Bill was moderate in tone and sympathetic in spirit, and His Honour in welcoming the measure said that the situation was so acute that Government had to appeal to the Chiefs and other public spirited persons to lend their houses for military purposes. This burden, however, should properly fall on the house-owners of Simla, who, in turn, would not suffer, any pecuniary disadvantage. The Bill, as amended at the meeting, was then passed unanimously. The last, but not the least interesting, motion was one advocating the use of Urdu in the Council proceedings instead of English the case for which was put by the Hon. Syad Makhdum Rajan Shah and as strenuously opposed by the majority of the members, both official and non-official. The Hon. Mr. Thompson's reply summed up the objections to the proposal on the score of the difficulty of keeping records of the proceedings in the absence of a system of Urdu shorthand, the paucity of good translators, and their high charges, the general preference among Indians for the English medium in courts and elsewhere and various other practical disadvantages. He had however His Honour's authority for announcing that in future where a question was asked in Urdu, and it was desired that the reply should be given in Urdu, the request would be complied with. The resolution was lost six voting for and sixteen against it.

Burma Legislative Council.

The Council met on five days during the year. At the first meeting on the 10th of January, the Burma **Excise** Bill, the Burma **Salt** Bill and the Burma **Water Hyacinth** Bill which had been discussed and published before the end of the preceding year were passed. But subsequently the modification of one clause in the Excise Bill was considered so important as to require the re-publication of the Bill, and it was again formally passed at the second meeting on the thirteenth of March.

At the second meeting on the 13th of March the Rangoon **Hackney Carriages** Bill which was introduced at the January meeting, was passed. This is an act to bring rickshaw pullers under control similar to that exercised by the Police over drivers of hackney carriages. The Burma **Towns** Amendment Bill, also introduced at the first meeting, was passed at the second meeting. Under this Act, Deputy Commissioners are given powers similar to those conferred on the Commissioner of Police for Rangoon in 1911 and may prohibit the carrying of dahs, bludgeons, loaded sticks, hunting crops, clasp knives, or other offensive weapons in any public place in all towns to which the Burma Towns Act of 1907 applies.

The only other Bill passed during the year was the Burma **Ghee** Adulteration Bill introduced at the fourth meeting on the twenty-second of October and passed at the fifth meeting on the twenty-fourth of October. The Bill makes it a punishable offence to sell as ghee mixtures which are not made solely from milk, and provides for the inspection of ghee intended for sale and the analysis of samples obtained in the course of inspection.

The Revised **Financial** Statement was presented by the Hon. Mr. Keith, Revenue Secretary, at the second meeting. The chief feature of the Revised Estimates for 1916-17 was the excess of revenue over the original estimates. Deducting from both the Revenue and Expenditure sides the Imperial contribution of 15¼ lakhs towards the administration of the North Eastern Frontier, we arrive at the following figures in the Budget Estimates: Receipts 545¾ lakhs, Expenditure 558¾ lakhs, which represent a decrease of a lakh in receipts and an increase of 2¼ lakhs in expenditure compared with 1915-16. The Revised Estimates show receipts amounting to Rs. 572½ lakhs. Of the improvement of 26¾ lakhs the Forest Department is responsible for 17 lakhs, Forest Revenue, which fell from 116 lakhs in 1913-14 to 97 lakhs in the two succeeding years, rose again during the year 1916-17 to 113 lakhs. The improvement was distributed also over Land Revenue (6 lakhs), Excise (7 lakhs), royalties on minerals and Income Tax. On the Expenditure side the Revised Estimate was 552¼ lakhs or 6¼ lakhs less than the Budget Estimate, but five lakhs of this sum was a merely nominal saving due to the transfer of Public Works grants, which could not be expended during the financial year, to the ensuing year's estimates.

The Budget Estimates for the year 1917-18, omitting a sum of 12¼ lakhs provided by the Imperial Budget for the North-East Frontier, show expenditure of 591½ lakhs against Receipts of 576 lakhs. The increase of nearly 40 lakhs in Expenditure includes the five lakhs transferred from the Public Works estimate for 1916-17, which accounts for a nominal increase of ten lakhs, ten lakhs provided for the Burma University from Imperial grants, and seven lakhs of new Expenditure on Education, of which three lakhs are derived from Imperial grants. The remainder is absorbed by the Forests and Public Works Department.

The debate on the Financial Statement took place at the third meeting of the Council on April 5th. The Hon. Mr. Goodliffe called attention to the omission from the estimates for the Agricultural Department of provision for the improvement of cattle breeding. The Hon. Mr. Chin Tsong asked for the erection of a Light House south of Rangoon for the benefit of ships entering the river from the south and for preferential treatment of British shipping. He pointed out that foreign ships engaged in the coastal trade were not bound by local rules with regard to load-line and other details. The Hon. Mr. Du Bern emphasised the need for improvement in the pay of teachers in Anglo-Vernacular schools, for the promotion of technical education and agricultural development and for greater freedom for Burma in the management of provincial matters and expenditure.

Replying the Hon. Mr. Webb stated that only the outbreak of the War had delayed the construction of a light vessel, for which plans and estimates had been prepared to be stationed twenty miles south of the China Bakir Light House. With regard to shipping, a committee appointed to investigate the questions raised by Mr. Chin Tsong decided that action must be taken if at all by the Imperial Government. Proposals for the improvement of the training and pay of teachers in connexion with the three-lakh grant recently sanctioned by the Imperial Government were under consideration. The Hon. Mr. Keith, adverting to the increased estimate of Revenue from excise, was not aware that there was any ground for attributing this rise to increased consumption, but the prosperous conditions existing meant keener competition for excise licenses. He indicated the steps that had been taken to provide for the further development of the Agricultural Department, for which several assistants were under training and two more experts were to be recruited. His Honour the President in reviewing the work of the year, referred to his approaching departure and summed up the progress during his administration and the part taken by Burma in the War. In a little over a year the output of wolfram had been double; large numbers of men and boats and large quantities of material had been despatched to Mesopotamia; the gift of Burma to the War Fund had reached nearly 29 lakhs and she was doing her duty by the War Loan, though there were few accumulations of property in the province; and the recruitment of Burmans for the military police, to take the place of Indians who had volunteered for War service, and the creation of a Company of Burma Pioneers had been eminently successful. The remains of German influence had been steadily cleared

out of the province. The opening up of new roads was being pushed on and fourteen lakhs had been provided for this purpose in two years. The cultivation of rubber and the colonisation of waste lands had been encouraged by Government aid. The Burma University had been advanced and a beginning would probably be made with the ad interim scheme in the near future. Educational finance had been simplified, Divisional School Boards had been created and the policy of making education more practical had been continuously followed. His Honour referred to the overcrowding of jails owing to the steady rise in the jail population as compared with other provinces in India. Experiments had been started to employ prisoners on outside work and a scheme had been drawn up for industrial and agricultural colonies to receive certain classes of prisoners during the latter portion of their sentences. He concluded: "The question of future finance has been engaging my attention, but I must leave it to my successor to deal with. I should like, however, to record my opinion that Burma is at a great disadvantage in regard to other provinces in having had its financial settlement fixed at a time before the main buildings of the Province and the roads had been made. The buildings of Burma, outside Rangoon and one or two headquarter stations, would be regarded as a scandal and a disgrace in any other province in India. As for the roads, what roads do exist are good, and good roads can be made in most parts of the Province; but in regard to road communication Burma is infinitely the worst provided province in India. It is quite clear that money spent in Burma will be productive of a quick return. It is quite clear also that money cannot be found from Provincial revenue. I myself consider that Burma has a strong claim on the revenue of the Imperial Government, and I do not hesitate to say that if the Imperial Government are not able to make grants to Burma, Burma can advance by borrowing the money in the open market for its communications. The greater part of the Municipal improvement of the Empire has been done on loans secured and repaid by a sinking fund, and this method of finance appears to me to be peculiarly suitable to the conditions of the problem in Burma.

Bihar and Orissa Legislative Council.

During the year 1917 only one Act was passed by the Legislative Council of Bihar and Orissa, the General Clauses Act, a purely formal and technical measure designed to give the new province the necessary facilities for drafting provincial measures.

One other Bill was introduced, the **Champaran Agrarian Bill**, as a result of the report of the Committee of Inquiry into the relations existing between landlords and tenants in that district, a measure which can hardly be described as non-contentious, and which has provoked a considerable stir in Tirhut. Briefly it is designed to stop the tinkathia system for the cultivation of indigo, under which the planter could insist that a certain proportion of a tenant's holding should be sown with indigo. It relieves the tenant of any liability to grow any specified crop and also empowers the Collector to take summary action in regard to the levy of salamis or the exaction of any payment other than the recorded rent. The Bill is chiefly criticised as being in fact an example of *ex post facto* legislation, and limiting a principle of general application to a particular class in a corner of the province, while the revenue administration reports of recent years have continually demonstrated the need of legislation for the relief of tenants throughout the province.

Another Bill, which provoked considerable opposition, was introduced in the Imperial Council. The **Patna University Bill** as introduced was a very different measure to the Act as passed, which provides merely for an examining authority, and alters but slightly the existing arrangements for University education. It includes a provision for a salaried Vice-Chancellor. Of the five meetings of the Legislative Council during the year three were mainly concerned with the introduction and subsequent debates on the Financial Statement.

Seven resolutions were moved two of which appointing a Committee to discuss amendments in the Local Self-government Act and recommending that the Local Government should take steps to further a system of commercial education either in separate institutions or in the existing educational institutions of the Province were accepted. The suggestion that a Committee should be appointed to examine the amendment of the Bengal Municipal Act was withdrawn as the Amending Bill had been prepared and was to be circulated for criticism. Two resolutions dealt with the provision of funds for the appointment of a Superintendent of Sanskrit Studies, and the provision of quarters for the clerks of the Board of Revenue in Patna. Both were withdrawn on assurances being given that the proposal would receive early consideration. A resolution that a Committee should be appointed to discuss the amendment of the Chota Nagpur Tenancy Act was also withdrawn when it was pointed out that reports had been invited from local officers on the working of that Act. The Hon. Babu Purnendu Narayan Sinha, a domiciled Bengali residing in Patna, moved a resolution that the administration of the Santal Parganas should be brought into line with that prevailing in other districts. The possible removal of the safeguards of the aboriginal residents of that district met with the earnest attention of the Hon. Rev. Dr. Campbell, a missionary who has devoted his life to work amongst the Santals, and his protest was also supported by the Government. The Mover confessed that he had not made himself acquainted with the proceedings of the Council in 1914, when a similar resolution was moved by the late Rai Seo Sankar Sahai Bahadur, as representing one of the landlords in the Santal Parganas, and was withdrawn. Similarly on this occasion the proposal met with little support and was withdrawn.

We regret that no summary of the Madras Legislative Council has been received from our Madras correspondent.

The Indian National Congress.

The following record of the early work of the Congress is written by the Hon. Sir Dinshah Wacha:—The Congress was practically founded in 1885 by the late Mr. Allan Octavian Hume, a retired member of the Indian Civil Service, and the son of the distinguished Joseph Hume, M.P., whose radicalism is so well known and who was one of the chief advocates of Retrenchment and Reform in the House of Commons in the forties or fifties. Mr. Hume had a distinguished career in the service. In his younger days when Collector and Magistrate at Etawah, he had rendered invaluable service in quelling the Mutiny in its incipient stage. For this service he was created a Civil Companion of the Bath, a rare honour in those days for a young Anglo-Indian Civil Servant. He retired from the service in 1883 after having honourably filled several high offices, the last of which was the Home Secretaryship of the Government of India. The policy of Lord Lytton's Government (1876-80) had aroused discontent in the country. The imposition of the Vernacular Press Act, commonly known as the Black Act, and the uncalled for hostilities with the Amir Shere Ali of Afghanistan which culminated in the Second Afghan War were the subject of much adverse criticism among the most moderate but enlightened Indians in all parts of the country. It was recognised in all quarters that the people should organise themselves by way of a conference to ventilate their grievances. Correspondence was passing among the Indian leaders of thought in the different provinces as to the formation of such a conference on a sound and permanent footing. The viceroyalty of Lord Ripon (1880-84) gave the necessary stimulus and encouragement. Thus by 1883, when Mr. Hume retired, the idea of the Conference had so far taken body and form that, with the sympathetic support of Mr. Hume, a Union was established after he had in 1883 the genuine support of many sterling friends of India in Parliament, especially John Bright and Mr. Stagg. Mr. Hume had been a silent but watchful observer of events and felt that he must give his active support to the movement, his heart being fully prepared to ameliorate the social, economical and political condition of the Indians. He was in close communication with the leaders in various provinces. Here it may also be worth while recording the fact that during the preliminary stage of the inception of the Congress, Mr. Hume, who had retired to Simla, had had the opportunity of consulting Lord Dufferin on the subject and it is a fact that His Lordship was at one with the object and greatly encouraged Mr. Hume in his mission. Subsequently after 1888 His Lordship, for reasons of his own, which have never been authoritatively declared, chose to assume a hostile attitude towards the organisation but it was effectually met by the speech which Mr. George Yule made in December 1888 at the Congress of Allahabad.

First Session.

Progress was so far made as to formulate the programme of a first meeting in Poona which at the time was the seat of great political activity. The Christmas week of 1885 was resolved upon for the inauguration of the Conference. Unfortunately, when the preparations were being made cholera broke out in the City of Poona and it was deemed unsafe to invite delegates there. Accordingly the seat of the first assembly was hurriedly transferred to Bombay under the auspices of the Bombay Presidency Association, with its then active honorary secretaries, Messrs. Pherozeshah M. Mehta, Kashinath Trimbuk Telang and Dinsha Edulji Wacha. It was at the same time resolved to christen it. "The Indian National Congress," having regard to the fact that its principal aim was faithfully to echo the public opinion of all India. So many misleading statements were made during the earliest years of the Congress as to its aims and objects that it may be useful to relate what they are as laid down by Mr. Hume himself in a speech he made at Allahabad in 1888, on the eve of the session of the Fourth Congress at that centre. Firstly, he prefaced his enumeration of the objects by stating that "no movement in modern historical times has ever acquired, in so short a period, such an appreciable hold on the minds of India, none has ever promised such wide reaching and beneficent results." Further on, it was observed that "the Congress movement is only one outcome, though at the moment the most prominent and tangible, of the labours of a body of cultured men, mostly born natives of India, who some years ago banded themselves together to labour silently for the good of India." As to the fundamental principles of the Congress they are:—

Firstly, the fusion into one national whole of all the different and discordant elements that constitute the population of India;

Secondly, the gradual regeneration along all lines, mental, moral, social and political of the nation thus evolved; and,

Thirdly, the consolidation of union between England and India by securing the modification of such of the conditions as may be unjust or injurious to the latter country.

The Split.

It was on the fundamental principles above stated that the Congress carried out its appointed work midst much misrepresentation, obloquy and even abuse, till 1907 when an extreme faction of delegates deliberately chose to raise a split in the united camp. At the Congress held in Surat in that year the session had to be abandoned owing to the violent outbreak of the factional spirit of those who since have been known as "Extremists," in contrast with the overwhelming majority of those entertaining sober views who are called "Moderates;" but if the proceedings were for the time abandoned, it was not without the leading men immediately organising themselves on the spot to take ways and means for the holding of future congresses and for the purpose of framing a written constitution of which the most important part was the creed of the Congress. In other words, the unwritten aims and objects of the Congress were reduced to

writing in a crystallised form As such it may be repeated here, as it should dispel all doubts, misgivings or misunderstandings of the true aims and objects of the Congress.

"The objects of the Indian National Congress are the attainment by the people of India of a system of Government similar to that enjoyed by the self-governing members of the British Empire, and a participation by them in the rights and responsibilities of the Empire on equal terms with those members. These objects are to be achieved by constitutional means by bringing about a steady reform of the existing system of administration and by promoting national unity, fostering public spirit and developing and organising the intellectual, moral, economic and industrial resources of the country."

Every delegate to the National Congress is obliged by the Congress Committee of the province from which he is sent to express in writing his acceptances of the above creed and his willingness to abide by the Constitution and the rules framed under it.

This Constitution has been in full working order since 1908. It is unalterable save by a Resolution of a majority in Congress assembled. It provides a guiding or directing staff of chosen leaders selected by each province and annually confirmed from the platform of the Congress by the President, Ex-Presidents, Secretaries and other office-bearers are nominated *ex-officio* members and the whole Committee is known by the name of the All India Congress Committee. The provinces are the same as the territorial divisions of the Government of India. The Committee of each Province is called the Provincial Congress Committee on whom devolves the duty, under the constitution and the rules, of calling meetings for the election of delegates, suggesting subjects to be brought forward for the consideration of the Congress and all cognate matters. The Congress declares each year at the close of the session where the next Congress is to be held. The town or city where it is to be held begins to make all preparations fully six months before the date of the holding of the session which has hitherto invariably been during the three days immediately succeeding Christmas Day That period is specially selected owing to the great convenience it affords to all classes of delegates in the country to attend—a convenience not offered at any other time during a year. A Reception Committee is formed with a leading person as its Chairman. That Committee divides its work among various sub-committees such as finance, correspondence, housing, feeding and so on. A band of active young persons volunteer to serve the different sub-committees. Formerly they were chiefly selected from among the student class but owing to the orders of Government in the Education Department, that students should take no active part in politics, volunteers are now wholly recruited from the circle of men of business or profession. Apart rom the delegates who generally number from 500 as a minimum to 1,000 or so as a maximum there is always a large number of visitors. So that the pendal is erected to contain at least 5,000 seats There have been some notable Congresses when the number seated has come to as many as 10,000. That was the number which congregated in Bombay in 1889 when Sir William Wedderburn presided and was accompanied from London by the late Mr. Charles Bradlaugh who afterwards introduced the first Reform Bill of the expanded Legislative Councils in Parliament in 1890. Delegates had had to pay a fee of Rs. 20 for attendance up till 1912 but the fee has since been reduced to Rs. 15. They are charged a very moderate fee for the days they are lodged and boarded. Some well-to-do delegates hire bungalows at their own expense, but the majority of delegates outside those of the province where a Congress is held, generally accept Congress accommodation which in smaller towns becomes a very serious and uphill task indeed.

British Committee.

It may be observed in conclusion that the Congress has an organisation also in London which is called the British Committee of the Congress. It is furnished with funds provided by the Indian National Congress. It has an establishment of its own and attached to it, though with independent income, an organ of opinion, called "India", which echoes the salient events of what may have happened every week in India. As such it performs useful service. It is well informed and is liberally circulated among members of Parliament who sympathise with Indian aspirations or take interest in the general progress and welfare of India. The Committee consists of retired Anglo-Indians and was for years presided over by that well-wisher and disinterested friend of India, Sir William Wedderburn, (d. 1918) who was twice elected President of the Congress. The Committee invariably invites distinguished or leading Indians when in London to take part in its deliberations. The Committee itself is in constant touch with all proceedings in the House of Commons on Indian affairs and often helps members to put questions when needed. Some years ago it formed a standing committee of members of the House of Commons and an attempt is about to be made to revive it. The Committee also keeps itself in communication with the India Office and often acts as a vehicle of conveying Indian opinion to the Secretary of State. As such the organisation renders valuable service to Indian cause in England.

The Congress Re-United.

For some years following 1907 efforts were made to heal the split and these were without avail until 1916 when a re-united Congress met at Lucknow under the presidency of Babu Ambica Charan Muzumdar of Faridpur in Bengal. At the close of an address the dominating feature of which was the claim of India to self-government the President formulated the Congress programme in the following passage:—

1. India must cease to be a dependency and be raised to the status of a self-governing state as an equal partner with equal rights and responsibilities as an independent unit of the Empire.

2. In any scheme of readjustment after the war, India should have a fair representation in the Federal Council like the colonies of the Empire.

3. India must be governed from Delhi and Simla, and not from Whitehall or Downing Street. The Council of the Secretary of State should be either abolished or its constitution so modified as to admit of substantial Indian representation on it. Of the two Under-Secretaries of State for India one should be an Indian and the salaries of the Secretary of State should be placed on the British estimates as in the case of the Secretary for the Colonies. The Secretary of State for India should, however, have no more powers over the Government of India than those exercised by the Secretary for the Colonies in the case of the dominions. India must have complete autonomy financial, legislative as well as administrative.

4. The Government of India is the most vital point in the proposed reforms. It is the fountain head of all the local administrations and unless we can ensure its progressive character any effective reform of the local governments would be impossible. For this the Services must be completely separated from the State and no member of any service should be a member of the Government. The knowledge and experience of competent members of a service may be utilised in the departments, but they should not be allowed to be members of the Executive Council or the Cabinet of the Government itself.

5. The Executive Government of India should vest in the Governor-General with a number of ministers not less than one-half of whom should be Indians elected by the elected non-official Indian members of the Supreme Legislative Council. These members should hold office for five years. Thus this ministry of the Viceroy will possess the composite character of a parliamentary and non-parliamentary cabinet.

6. The Upper House of Representatives in Canada is composed of 90 members. The Supreme Legislative Council in India should consist of at least 150 members. These members should be all elected. But for the transitory period one-fifth may be appointed by the Cabinet, not more than one-fourth of whom may be officials.

7. The annual budget should be introduced into the Legislative Council like money Bills, and except the military estimates the entire Budget should be subject to the vote of the Council.

8. The Provincial Governments should be perfectly autonomous, each Province developing and enjoying its own resources, subject only to a contribution towards the maintenance of the Supreme Government.

9. A Provincial administration should be vested, as in the case of the Supreme Government, in a Governor with a Cabinet not less than one-half of whom should be Indians elected by the non-official elected Indian members of its Legislative Council.

10. The Provincial Legislative Council should in the case of a major province consist of 100 members and in the case of a minor province 75 members all of whom should be elected by the people and each district must have at least one representative of its own. For the transitory period there should of course be the same conditions and restrictions as in the case of the Supreme Legislative Council.

11. As the executive and the legislative functions are to be separated so there must be complete separation of the judicial from the executive functions of the State. The judicial administration whether civil or criminal, should be wholly vested in the High Courts both as regards control as well as the pay, prospect and promotion of its officers. The High Courts should be subordinate only to the Supreme Government.

12. The Arms Act should be repealed or so modified as to place the Indians exactly on the same footing with the Europeans and Eurasians. The Press Act should be removed from the Statute Book and all the repressive measures withdrawn.

13. India should have a national militia to which all the races should be eligible under proper safeguards and they should be allowed to volunteer themselves under such conditions as may be found necessary for the maintenance of efficiency and discipline. The Commissioned ranks in the army should be thrown open to his Majesty's Indian subjects.

14. A full measure of local self-government should be immediately granted throughout the country and the Corporations of the Presidency towns the District and the Taluk boards and the district municipal corporations should be made perfectly self-governing bodies with elected members and elected chairmen of their own. They should be freed from all official control except such as may be legally exercised by the Government direct.

15. Mass education should be made free and compulsory. Suitable provisions should also be made for the development and encouragement of indigenous industries.

THE JOINT SCHEME.

The year 1917 was one of considerable political activity and agitation. Led by Mrs. Annie Besant the Home Rule League embarked upon a policy of active criticism of Government. Regarding this as tending to subvert all authority in Madras, the Madras Government ordered Mrs. Besant, and her two most active coadjutors Mr. Arundale and Mr. Wadya, to remain under detention at Ootacamund, a place subsequently altered to Coimbatore. This measure, following pronouncements by Lord Pentland, the Governor of Madras, and Sir Michael O'Dwyer, Lieutenant-Governor of the Punjab, that Home Rule was at present an impracticable vision, caused considerable excitement throughout the country. Protest meetings were held in many centres, and by the Extreme Wing a policy of passive resistance to Government was proposed.

To consider these and various other questions the All-India Congress Committee and the Council of the Moslem League held a joint session in Bombay on July 28th and 29th. At the close of the proceedings the following summary was given to the public.

The following resolutions were passed at the joint conference of the Congress committee and the Council of the Moslem League:—

Dadabhai Naoroji.

(*a*) The All-India Congress committee and the Council of the Moslem League record their sense of profound sorrow and irreparable loss the country has sustained by the death of India's Grand Old Man, Dadabhai Naoroji. His great services to the Motherland will always enshrine his memory in the grateful recollections of his countrymen, while his saintly character, private work and public virtues will for all time to come be an example and inspiration to the people of India.

Political Work and Passive Resistance.

(*b*) The Provincial Congress committees and the Council of the All-India Moslem League be requested to consider the advisability of adopting a policy of passive resistance both as regards its principle and working in carrying on political work, and to send their opinion to the general secretaries to the Indian National Congress within 6 weeks. Such opinions, when received, be circulated amongst the members of the All-India Congress committee and the Council of the All-India Moslem League and a joint meeting of the two bodies be held to consider the matter at Allahabad in the first week of October next.

Protest against Bengal Government's Order.

(*c*) Resolved that this joint session of the Congress and the League records its strong protest against the high-handed action of the Government of Bengal in prohibiting the public meeting which was to be held in Calcutta under the presidency of Sir Rash Behari Ghose to protest against the internment of Mrs. Besant, Messrs. Arundale and Wadia and trusts that the people of Bengal will use every lawful means to vindicate their constitutional rights of freedom of speech and meeting. Resolved further that the Congress committee and the Council of the League request the Government of India and the Secretary of State to direct the Government of Bengal to forthwith withdraw the order in question prohibiting the holding of the meeting above referred to.

Confidence in Lord Hardinge.

(*d*) That this joint session of the All-India Congress committee and the Council of the All-India Moslem League desires to place on record the undiminished confidence of their countrymen in Lord Hardinge whose sympathetic and liberal policy won the love and esteem of India and enabled the Government of India to send Indian troops to France at a critical juncture. It was Lord Hardinge's courage and sagacity that made this and other contributions by India to the war possible. Indian public opinion deeply resents the attempt made to discredit him by attributing to him the responsibility for the failures in Mesopotamia. India claims a determining voice in any judgment to be passed on the administration of any of her Viceroys. Resolved further that the above resolution be cabled to the Prime Minister and the Secretary of State.

Special Session of Provincial Conferences.

(*e*) That this meeting recommends to the provincial Congress committees the desirability of holding a special session of provincial conferences on the same day to give united and public expression to the feeling of the country on the present political situation.

Supplementary Congress Meeting.

(*f*) That this meeting recommends that arrangements be made for holding supplementary Congress meetings in every district on the same day on which the Indian National Congress will meet at Calcutta at which the translations of the address of the President in the vernacular or the vernaculars of the province should be read and the resolution of the last Congress on the scheme for self-government be adopted.

Support of Reforms Scheme.

(*g*) That a petition to Parliament be submitted in support of the scheme of reforms adopted by the Indian National Congress and the Moslem League to be prepared by the Hon. Pandit Madan Mohan Malaviya, Sir N. G. Chandavarkar and Mr. N. M. Samarth.

Messrs. Mahomed Ali and Shaukat Ali.

(*h*) That this joint meeting urges upon the Government that no further time be lost in restoring to liberty Messrs. Mahomed Ali and Shaukat Ali who have been long kept under confinement under the Defence of India Act arbitrarily without any charges being formulated or proved against them.

The Madras Internments.

(*i*) That a telegram in the name of the meeting be sent to Mrs. Besant and Messrs. Wadia and Arundale.

The policy foreshadowed in the speeches made in May last by His Honour Sir Michael O'Dwyer, Lieutenant-Governor of the Punjab, and His Excellency Lord Pentland, Governor of Madras, followed by the orders of the Madras Government interning Mrs. Besant and two of her co-workers, Messrs. Arundale and Wadia, under the Defence of India Act and *ex post facto* approval which the Right Honourable Austen Chamberlain, as Secretary of State for India, though fit to give to the Madras Government's action, have created a situation so fraught with anxiety to all who are interested in the orderly progress and advancement of the country that this Joint Session of the All-India Congress Committee and the Council of the All-India Muslim League specially convened to consider the grave situation and held at Bombay on the 28th and 29th July 1917, deems it its duty both to the Government and the people to submit the following representation to the Secretary of State for India for his careful consideration.

2. Long before the war the Indian National Congress, in the written constitution which it framed for itself in 1908, placed before the country as its object the attainment of self-govern-

ment within the Empire on Colonial lines by a steady reform of the existing system of administration by constitutional means. Prior to that, the same ideal had been clearly enunciated on the platform of the Congress in the Presidential address of the late Mr. Gokhale in 1905 and more explicitly still in that of the late Grand Old Man of India, Dadabhai Naoroji, in 1906. Self-government for India within the Empire to be attained in the same manner and by the same means was also formally adopted as its ideal by the All-India Muslim League at its session held in 1913.

3. In December 1915, the Honourable Sir S. P. Sinha, as President of the 30th Indian National Congress held at Bombay, earnestly appealed to England to declare her ungrudging approval of India's cherished ideal of self-government within the Empire and take steps to make an effective advance towards that goal at the close of the war. It was under his presidency that the Congress passed a resolution authorising the All-India Congress Committee to frame a scheme of substantial measures of reform towards the attainment of that goal and to submit the scheme for the approval of the next Congress after conferring with the Committee which the All-India Muslim League was to appoint for the same purpose.

4. Accordingly, leading members of the Congress at Bombay; Madras and Calcutta sat from day to day for several weeks to frame a detailed scheme of reforms. The schemes so prepared were carefully considered clause by clause for three days at a meeting of the All-India Congress Committee held at Allahabad on the 22nd, 23rd and 24th of April 1916 and the result of the Committee's prolonged deliberations was embodied in a tentative scheme to be further considered in concert with the Reform Committee appointed by the All-India Muslim League, which also tentatively framed its own scheme in August 1916, more or less of the same lines. On the basis of the schemes so framed nineteen elected members of the Viceroy's Legislative Council drew up a memorandum in which they embodied the main feature of the schemes and submitted it to the Viceroy over their signatures in October 1916.

5. The All-India Congress Committee and the Reform Committee of the All-India Muslim League met at Calcutta in November 1916 and again at Lucknow in December 1916 and conjointly settled a detailed scheme of reforms as a definite step towards self-government which they desired the Government to make at the close of the war. This joint scheme was unanimously passed by the Indian National Congress and also by the All-India Muslim League at their sessions held at Lucknow in December last.

6. This scheme does not ask for full and responsible "self-government" or "Complete autonomy for India" at the close of the war but asks for certain necessary constitutional reforms in the existing system of Government in India, which, if carried out, would only constitute a definite step in the direction of self-government for India within the Empire.

7. In December last the Indian National Congress passed a resolution calling upon its own Congress Committee, the Home Rule League and other constitutional associations which have as their object the attainment of self-government for India within the Empire, to carry on an educative propaganda throughout the year on law-abiding and constitutional lines in support of the scheme of reforms adopted by the Congress and the Muslim League which they have been doing ever since.

8. Before this educative propaganda could be seriously undertaken in all parts of the country, the reforms formulated after great thought and an anxious deliberation by men of light and leading in India, became the subject of strong adverse criticism in high quarters. His Excellency the Viceroy Lord Chelmsford, made a speech at Calcutta on the eve of the Congress session in December last, in which, referring apparently to the memorandum of the nineteen elected members of his Legislative Council, he deprecated what he was pleased to call "catastrophic changes." About the same time, in an article which Lord Sydenham contributed to last year's December number of *The Nineteenth Century and After* and to which he gave the sensational heading "The Danger in India," he condemned the proposals of the nineteen elected members as "revolutionary proposals." In a second article on the same subject in this year's January number of the same magazine, he insinuated that German intrigue was at work in India and in the same breath went the length of misrepresenting, with special reference to the memorandum, which he called "the immediate aims of the party called 'Moderate,' that 'some Moderates under the influence of Extremists are demanding a revolution" and concluded by suggesting that repression was inevitable to avert "the danger" involved in allowing such demands to be made.

9. The policy suggested by Lord Sydenham did not take long to be inaugurated in this country. It is generally believed that in March last the Government of India issued a circular to local Governments outlining the policy to be pursued by the latter in connection with the Indian demand for the reforms. The terms of that circular are not known to the public. But in May last His Honour Sir Michael O'Dwyer Lieutenant-Governor of the Punjab, and His Excellency Lord Pentland, Governor of Madras made pronouncements which betray, by their similarity of tenor and phraseology, a common source of inspiration. In those pronouncements taken conjunctively, the two Provincial authorities exaggerate the nature of the Indian demands, deprecate them in strong language, enjoin the people to abstain from all agitation while the war was going on and threaten them with repressive action if they did not do so. Further, they declare that the post-war reforms which will be granted would be of but a minor character and would fall far short of public expectations. These pronouncements created great unrest in the country. The exaggerated statement of Sir Michael O'Dwyer in particular that the changes proposed by the Indian party of reform "would be as revolutionary in their character and as subversive of the existing constitution as those which the Ghadar emissaries endeavour to bring about" transgressed all limits of fair criticisms and was not only intemperate but provocative.

10. Educated Indians resented being told, notwithstanding what was going on in England and in other parts of the Empire, not to carry on during the war an educative propaganda for any constitutional reform whatever but to remain silent on pain of repression, while the Government of India were known to have formulated in secret and despatched to the Secretary of State for his approval certain proposals for post-war reforms which, judging from the speeches of the Provincial authorities referred to above could only be of a minor character. It was apparently in view of the nature of these proposals that the people were asked to give up vain hopes and extravagant expectations.

11. The hopes and expectations which the Indian public were told not to entertain have been ardently cherished by them for more than a generation and were further strengthened by the assurances given by responsible British statesmen since the beginning of the war in warm appreciation of India's spontaneous and enthusiastic rally in the cause of the Empire and her unstinted help to England in men, money and munitions—assurances, repeated from time to time, in language of undoubted sincerity encouraging India to hope that after the war she will have her full share of liberty, justice and political equality, for which England and her great Allies were carrying on this titanic struggle.

12. For the authors of the pronouncements to tell the Indian public that the post-war reforms would fall far short of their expectations was tantamount to their pre-judging the issue and trying to force their own conclusions on the people of India in supersession and in defiance of the authority of the British Parliament with whom alone rests the final decision of the matter.

13. To tell the Indian public that the post-war reforms would be but of minor character, as outlined by them in their speeches, was the more regrettable on account of the obvious implication that the assurances given by responsible British statesmen from the Prime Minister downwards were more hollow hopes held out by them to the people of India on grounds of political expediency.

14. Anything said or done which is calculated to create such an impression and thus to shake the confidence of the Indian public in the political integrity of British statesmanship is irritating to educated Indians as a class, striven as they have for nearly half a century to inculcate loyalty to the British connection in the minds of their countrymen based on their own reasoned conviction that the freedom loving instincts and the sense of honour and justice of the British Democracy, as represented by high-souled British statesmanship, may safely be relied on by India for realising her aspirations for political freedom as a self-governing unit of the British Empire.

15. The irritation caused by the pronouncements of the Provincial authorities referred to above became acute when the threats of the Madras Government materialised in the internments of Mrs. Besant and her two associates Messrs. Arundale and Wadia, under the Defence of India Act. In the absence of any evidence placed before the country establishing that any of the persons interned had in reality acted or was really about to act in a manner prejudicial to the public safety, which alone would justify executive action under the drastic provisions of that Act, the thinking and independent portion of the Indian public is naturally reluctant to accept the *ipse dixit* of the executive in a matter of this kind and is disposed not only to question the justice and propriety of such extreme measures but to characterise the step taken as arbitrary and unjustifiable and as a great political blunder calculated to produce mischievous consequences of a far-reaching character on the public life of the country.

16. There is a consensus of opinion among Indians throughout the country that these internments are the result of a policy of repression inaugurated with a view to put down all agitation for constitutional reform while the war was in progress, so that the silenced Indian public may be forced to accept such small concessions as the Government of India may be willing to make.

17. The authorities responsible for this policy of repression failed to estimate correctly the real strength of opinion in the country demanding a substantial step forwards towards self-government for India within the Empire at the close of the war. They failed to realise further that educated India convinced of the justice of its cause and determined, by all constitutional means, to see it triumph, cannot thus be coerced into submission.

18. These being the main reasons which have created a storm of indignation throughout the country, the remedies for allaying it and restoring the confidence of the Indian public are in the hands of Government and should be resorted to without delay in the interests of peaceful progress.

19. Those remedies are:

(*a*) That an authoritative pronouncement be made pledging the Imperial Government in unequivocal terms to the policy of making India a self-governing member of the British Empire and enjoining the agents and servants of the Crown in India to make honest and strenuous efforts to achieve the end in view at an early date.

(*b*) That immediate steps be taken to sanction the scheme of reforms conjointly framed and adopted by the Indian National Congress and the All-India Muslim League with a view to give effect to it at the close of the war.

(*c*) That pursuant to the aforesaid authoritative pronouncement the proposals which the Government of India may frame shall be published for public discussion.

(*d*) Complete reversal of the policy of repression inaugurated by the authorities in India and as an earnest thereof the immediate release of Mrs. Besant and Messrs. Arundale and Wadia.

20. These are the measures which this joint session earnestly appeals to the Imperial Government to adopt before the present political situation in India, which is already one of grave anxiety, becomes deplorably complicated. Statesmen in high office are sometimes apt to withhold, for fear of appearing to have yielded to popular clamour, what they would otherwise

be willing to concede. This joint session trusts that no such consideration will deter the Imperial authorities from pursuing the statesmanlike course of assuaging the public feeling in India without delay. That feeling which was already acute is being intensified by the authorities in India denying even to the most respected citizens of unquestioned loyalty in different parts of the country the elementary right to hold a public meeting to criticise the actions of Government in a thoroughly lawful and constitutional manner. The Bengal Government have intensely aggravated the situation by issuing orders on Friday last to stop the public meeting which was to have been convened by the Sheriff on a requisition and to be held at the Town Hall of Calcutta under the presidency of Sir Rash Bihari Ghose to criticise the action of the Madras Government in interning Mrs. Besant and her two associates. Any delay in ordering a complete reversal of this repressive policy would be deplorable beyond measure.

The Congress of 1917-18.—Before the Congress of 1917-18 was held in Calcutta the situation underwent a marked change. On August 20. Mr. Montagu, the Secretary of State for India, made the following announcement in the House of Commons:—"The Government of India have for some time been urging that a statement should be made in regard to Indian policy, and I am glad to have the opportunity of meeting their wishes. The policy of his Majesty's Government, with which the Government of India are in complete accord, is that of the increasing association of Indians in every branch of the administration, and the gradual development of self-governing institutions, with a view to the progressive realization of responsible government in India as an integral part of the British Empire. They have decided that substantial steps in this direction should be taken as soon as possible, and that it is of the highest importance as a preliminary to considering what these steps should be, that there should be a free and informal exchange of opinion between those in authority at home and in India. His Majesty's Government have accordingly decided, with his Majesty's approval, that I should accept the Viceroy's invitation to proceed to India to discuss these matters with the Viceroy and the Government of India, to consider with the Viceroy the views of local governments, and to receive with him the suggestions of representative bodies and others. I would add that progress in this policy can only be achieved by successive stages. The British Government and the Government of India, on whom the responsibility lies for the welfare and advancement of the Indian peoples, must be the judges of the time and measure of each advance, and they must be guided by the co-operation received from those upon whom new opportunities of service will thus be conferred, and by the extent to which it is found that confidence can be reposed in their sense of responsibility. Ample opportunity will be afforded for public discussion of the proposals, which will be submitted in due course to Parliament."

In order to produce a tranquil atmosphere during this visit Mrs. Besant and her coadjutors were released from their detention, but Messrs. Mahomed Ali and Shaukat Ali were not released as they refused to sign an unconditional declaration of their loyalty to His Majesty the King Emperor. Mrs. Besant was unanimously elected president of the Congress and delivered a speech of immense length chiefly devoted to the necessity of self-government in India and the fitness of the country for such government. The principal resolution before the Congress was moved by Sir Surendranath Banerji and was as follows:—

"The Congress expresses its grateful satisfaction over the pronouncement made by His Majesty's Secretary of State for India on behalf of the Imperial Government that its object is the establishment of responsible government in India. This Congress strongly urges the necessity for the immediate enactment of a Parliamentary statute providing for the establishment of responsible government in India, the full measure to be attained within a time limit to be fixed in the statute itself at an early date. This Congress is emphatically of opinion that the Congress-League scheme of reforms ought to be immediately introduced by the statute as the first step in the process."

The Congress preserved an outward appearance of unanimity; but as a matter of fact with a single exception of the Surat Conference of 1907 it always does. The real fight takes place in the Subjects Committee where the resolutions are prepared. There was an unusual controversy in the Subjects Committee at Calcutta. The Congress was really divided between the two branches of the Extreme Wing, one led by Mrs. Besant and the other led by Mr. B. G. Tilak. Both of them used the funds at their disposal to take a large number of delegates to Calcutta and the approximate figure given is 2,000 for Mrs. Besant and 1,000 for Mr. Tilak. Mrs. Besant and her coadjutors wished to fix an arbitrary date of 1923 or at the outside alternative 1928 for the establishment of full self-government. Prolonged discussions took place in the Subjects Committee over this proposal which was withdrawn only when many of the Mahomedan members and Congressmen of standing threatened to secede if it was adhered to. The resolution actually adopted was a compromise to meet these views. The Congress of 1918-19 is to be held at Delhi.

The Moslem League.

The Indian Moslem League was established in 1906. Prior to that time the Indian Moslems had stood aloof from politics. Acting under the guidance of the greatest man they have produced, **Sir Syed Ahmad**, they devoted their attention to education, founding the Aligarh College with the special purpose of making up the leeway of Mahomedans in education, and left politics to the other Indian peoples. A few Mahomedans joined the National Congress and took part in its annual sessions; but the community as a whole stood aside from political movements.

In 1906 however changes occurred which impelled Indian Moslems to action. Under the Act of 1892, constituting the Indian Legislative Councils, there was no specific Moslem representation and in the elections which had taken place under that Act the Moslems had for all practical purposes failed to find selection. Therefore, when the amendment of the Act and the extension of the representative principle were under discussion, they were stirred to action. They feared lest, under an academic system, adapted only to a homogeneous people, their distinct communal interests would either secure no representation at all, or only inadequate representation. They therefore took counsel together and approached the Viceroy in deputation, headed by His Highness the Aga Khan, and presented their views in an important State paper. In this they laid stress on their position in the following passage:—

"Representative institutions of the European type are new to the Indian people—many of the most thoughtful members of our community, in fact, consider that the greatest care, forethought, and caution will be necessary if they are to be successfully adapted to the social, religious and political conditions obtaining in India—and that in the absence of such care and caution their adoption is likely, amongst other evils, to place our national interests at the disposal of an unsympathetic majority."

Feeling that the Mahomedans were a distinct community, and that their interests had suffered because they had been under-represented, the deputation asked for representation on a communal basis, and for representation in excess of their actual numerical strength on account of the peculiar and historical position of the Moslem *community*. This request was accepted, and the Imperial and Provincial Councils embodied the principle of Mahomedan representation on a communal basis.

First Constitution.

It was felt that in view of the changed conditions the Moslems should organise their own political society for the expression of their communal policy. This was the origin of the Moslem League. The rules and regulations of the League provided for a constitution, with provincial branches, and defined the objects of the League in the following language:—

The objects of the League shall be—

(*a*) to promote among Indian Mussalmans feelings of loyalty towards the British Government, and to remove any misconception that may arise as to the intentions of Government with regard to any of its measures:

(*b*) to protect the political and other rights and interests of Indian Mussalmans and to place their needs and aspirations before the Government in temperate language:

(*c*) without prejudice to the objects mentioned under (*a*) and (*b*) of this section, to promote so far as possible concord and harmony between the Mussalmans and other communities of India.

Revised Constitution.

In 1912 and 1913 Moslem opinion as expressed by the League underwent a certain change. First at a meeting of the Council, afterwards at the annual session which was held at Lucknow, the constitution was amended so as to include in the objects of the League the attainment of a system of **self-government** in India under the Crown. The objects of the League, as defined in the most recent publication, are thus set forth:—

The objects of the League shall be:—

(*a*) to maintain and promote among the people of this country feelings of loyalty towards the British Crown:

(*b*) to protect and advance the political and other rights and interests of the Indian Mussalmans:

(*c*) to promote friendship and union between the Mussalmans and other communities of India:

(*d*) without detriment to the foregoing objects, attainment, under the ægis of the British Crown, of a system of self-government suitable to India, through constitutional means, by bringing about, amongst others, a steady reform of the existing system of administration, by promoting national unity, by fostering public spirit among the people of India and by co-operating with other communities for the said purposes.

This change in the constitution of the League produced much discussion and was opposed by many of the older men who had led the community.

London Branch.

There is a branch of the Moslem L... in London, of which the Right Hon... Amir Ali is President. In the aut... 1913 the London office bearers resi... the result of differences of opinion ... Indian Moslems who were visiting ... Mr. Mahomed Ali and Mr. Vazier K... honorary secretary of the Leagu... Amir Ali thus described the nature ... differences: "an endeavour to capt... organisation here and to impose on ... own will. To both of these attempts ... in the interests of the Mussalman commu... bound to take strong objection." In res... to strong pressure from the Provincial Le... in India, the London office bearers res... their posts and the London Branch of ... League continues under the former person...

The headquarters of the League are at Luc... now.

Hindu-Mahomedan Entente.—The 1916-17 session of the Moslem League was held at Lucknow immediately after the session of the Congress, and at each of those two sessions references were made to the fact that the two organisations were rapidly converging. The President of the Congress (Mr. Ambika Charan Muzumdar) in his address said: "The Hindu-Moslem question has been settled and the Hindus and Mussalmans have agreed to make a united demand for self-government. The All-India Congress Committee and the representatives of the Moslem League who recently met in conference at Calcutta have after two days' deliberations in one voice resolved to make a joint demand for a Representative Government in India. There are little differences on one or two minor points of detail but they count for nothing. The vital issue has been solved and the main point has been gained."

The President of the All-India Moslem League (Mr. M. A. Jinnah) in his address said: "In its general outlook and ideal as regards the future, the All-India Moslem League stands abreast of the Indian National Congress and is ready to participate in any patriotic efforts for the advancement of the country as a whole. In fact this readiness of the educated Moslems, only about a decade after they first entered the field of politics, to work shoulder to shoulder with the other Indian communities for the common good of all is to my mind the strongest proof of the value and need of the separate Moslem political organisation at present. I have been a staunch Congressman throughout my public life and have been no lover of sectarian cries, but it appears to me that the reproach of "Separatism" sometimes levelled at Mussalmans, is singularly inapt and wide of the mark when I see this great communal organisation rapidly growing into a powerful factor for the birth of United India. 'A minority must, above everything else, have a complete sense of security before its broader political sense can be evoked for co-operation and united endeavour in the National tasks. To the Mussalmans of India security can only come through adequate and effective safeguards as regards their political existence as a community."

What the League stands for.—The attitude of the League was defined as follows by the President of the Reception Committee (Mr. Nabiullah): "The All-Indian Moslem League stands to-day for two principal objects, namely, for the safe-guarding of the political position of Mussalmans and for co-operation with the other communities for the attainment of self-government. The realisation of the first object is, as all fair minded persons would be ready to admit, an essential condition of the success of the second. It would be idle to talk of co-operation if the Mussalmans did not feel a complete sense of security as regards their communal future. They are a "minority" and in all political developments a minority must have certain definite safeguards. The Moslem demand for such safeguards is, therefore, natural and legitimate and the "majority" which in any case holds the balance of power, cannot oppose this demand without laying itself open to the charge of selfishness and political insincerity. Let our Hindu brothers remember that an adequate and effective separate representation of Mussalmans in self-governing institutions can in no case deprive them of the decisive power of the majority. When such power is guaranteed to them by their number I fail to see why some of their communal enthusiasts should deny to Mussalmans the right to secure their political existence. Opposition of this character breeds distrust and the good faith of those who base such opposition on grounds of unity and nationalism comes to be questioned by Moslem rank and file."

SUGGESTED POST-WAR REFORMS.

The following scheme of post-war reforms was prepared by the All-India Congress Committee in conjunction with the Reform Committee of the All-India Moslem League in 1916:—

I.—Provincial Legislative Councils.

1. Provincial Legislative Councils shall consist of four-fifths elected and of one-fifth nominated members.

2. Their strength shall be not less than 125 members in the major provinces, and from 50 to 75 in the minor provinces.

3. The members of Councils should be elected directly by people on as broad a franchise as possible.

4. Adequate provision should be made for the representation of important minorities by election, and that the Mahomedans should be represented through special electorates on the Provincial Legislative Councils.

Provided that Mahomedans shall not participate in any of the other elections to the Legislative Councils.

5. The head of the Provincial Government should not be the President of the Legislative Council but the Council should have the right of electing its President.

6. The right of asking supplementary questions should not be restricted to the member putting the original question, but should be allowed to be exercised by any other member.

7. (*a*) Except customs, post, telegraph mint, salt, opium, railways, army and navy, and tributes from Indian States, all other sources of revenue should be provincial.

(*b*) There should be no divided heads of revenue. The Government of India should be provided with fixed contributions from the Provincial Governments, such fixed contributions being liable to revision when extraordinary and unforeseen contingencies render such revision necessary.

(*c*) The Provincial Council should have full authority to deal with all matters affecting the internal administration of the Province including the power to raise loans, to impose and alter taxation, and to vote on the Budget. All items of expenditure, and all proposals concern-

ing ways and means for raising the necessary revenue, should be embodied in Bills and submitted to the Provincial Council for adoption.

(d) Resolutions on all matters within the purview of the Provincial Government should be allowed for discussion in accordance with rules made in that behalf by the Council itself.

(e) A resolution passed by the Legislative Council shall be binding on the Executive Government, unless vetoed by the Governor in Council, provided however that if the resolution is again passed by the Council after an interval of not less than one year, it must be given effect to.

(f) A motion for adjournment may be brought forward for the discussion of a definite matter of urgent public importance if supported by not less than one-eighth of the members present.

8. Any special meeting of the Council may be summoned on a requisition by not less than one-eighth of the members.

9. A Bill other than a Money Bill, may be introduced in Council in accordance with the rules made in that behalf by the Council itself and the consent of the Government should not be required therefor.

10. All Bills passed by Provincial Legislatures shall have to receive the assent of the Governor before they become law, but may be vetoed by the Governor-General.

11. The term of office of the members shall be five years.

II.—Provincial Government.

1. The head of every Provincial Government shall be a Governor who shall not ordinarily belong to the Indian Civil Service or any of the permanent services.

2. There shall be in every Province an Executive Council which, with the Governor, shall constitute the Executive Government of the Province.

3. Members of the Indian Civil Service shall not ordinarily be appointed to the Executive Councils.

4. Not less than one-half of the members of Executive Council shall consist of Indians to be elected by the elected members of the Provincial Legislative Council.

5. The term of office of the members shall be five years.

III.—Imperial Legislative Council.

1. The strength of the Imperial Legislative Council shall be 150.

2. Four-fifths of the members shall be elected.

3. The franchise for the Imperial Legislative Council should be widened as far as possible on the lines of the Mahomedan electorates and the elected members of the Provincial Legislative Councils should also form an electorate for the return of Members to the Imperial Legislative Council.

4. The President of the Council shall be elected by the Council itself.

5. The right of asking supplementary questions shall not be restricted to the member putting the original question but should be allowed to be exercised by any other member.

6. Any special meeting of the Council may be summoned on a requisition by not less than one-eighth of the members.

7. A Bill, other than a Money Bill, may be introduced in Council in accordance with rules made in that behalf by the Council itself, and the consent of the Executive Government should not be required therefor.

8. All Bills passed by the Council shall have to receive the assent of the Governor-General before they become law.

9. All financial proposals relating to sources of income and items of expenditure shall be embodied in Bills. Every such Bill and the Budget as a whole shall be submitted for the vote of the Imperial Legislative Council.

10. The term of office of members shall be five years.

11. The matters mentioned herein below shall be exclusively under the control of the Imperial Legislative Council:—

(a) Matters in regard to which uniform legislation for the whole of India is desirable.

(b) Provincial legislation in so far as it may affect inter-provincial fiscal relations.

(c) Questions affecting purely Imperial Revenue, excepting tributes from Indian States.

(d) Questions affecting purely Imperial expenditure, except that no resolution of the Imperial Legislative Council shall be binding on the Governor-General in Council in respect of Military charges for the defence of the country.

(e) The right of revising Indian tariffs and customs duties, of imposing, altering, or removing any tax or cess, modifying the existing system of currency and banking and granting any aids or bounties to any or all deserving and nascent industries of the country.

(f) Resolutions on all matters relating to the administration of the country as a whole.

12. A Resolution passed by the Legislative Council should be binding on the Executive Government, unless vetoed by the Governor-General in Council: provided however that if the Resolution is again passed by the Council after an interval of not less than one year, it must be given effect to.

13. A motion for adjournment may be brought forward for the discussion of a definite matter of urgent public importance, if supported by not less than one-eighth of the members present.

14. The Crown may exercise its power of veto in regard to a Bill Passed by a Provincial Legislative Council or by the Imperial Legislative Council within twelve months from the date on which it is passed, and the Bill shall cease to have effect as from the date on which the fact of such veto is made known to the Legislative Council concerned.

15. The Imperial Legislative Council shall have no power to interfere with the Government of India's direction of the military affairs and the foreign political relations of India, including the declaration of war, the making of peace and the entering into treaties.

IV.—The Government of India.

1. The Governor-General of India will be the head of the Government of India.

2. He will have an Executive Council half of whom shall be Indians.

3. The Indian members should be elected by the elected members of the Imperial Legislative Council.

4. Members of the Indian Civil Service shall not ordinarily be appointed to the Executive Council of the Governor-General.

5. The power of making all appointments in the Imperial Civil Services shall vest in the Government of India as constituted under this scheme, and subject to any laws that may be made by the Imperial Legislative Council.

6. The Government of India shall not ordinarily interfere in the local affairs of a province, and powers not specifically given to a Provincial Government shall be deemed to be vested in the former. The authority of the Government of India will ordinarily be limited to general supervision and superintendence over the Provincial Governments.

7. In legislative and administrative matters the Government of India as constituted under this scheme shall, as far as possible, be independent of the Secretary of State.

8. A system of independent audit of the accounts of the Government of India should be instituted.

V.—The Secretary of State in Council.

1. The Council of the Secretary of State or India should be abolished.

2. The salary of the Secretary of State should be placed on the British Estimates.

3. The Secretary of State should, as far as possible, occupy the same position in relation to the Government of India, as the Secretary of State for the Colonies in relation to the Governments of the self-governing dominions.

4. The Secretary of State for India should be assisted by two Permanent Under-Secretaries, one of whom should always be an Indian.

VI—Military and other matters of policy.

1. The military and naval services of His Majesty, both in their commissioned and non-commissioned ranks, should be thrown open to Indians and adequate provision should be made for their selection, training and instruction in India.

2. Indians should be allowed to enlist as volunteers.

3. Indians should be placed on a footing of equality in respect of status and rights of citizenship with other subjects of His Majesty the King throughout the Empire.

4. The Executive Officers in India shall have no judicial powers entrusted to them and the judiciary in every Province shall be placed under the highest Court of that Province.

N. B.—As regards communal representation in Legislative Councils the following percentages have been agreed upon:

Mahomedan representation for the Punjab 50 per cent., Bengal 40 per cent., Bombay 33⅓ per cent., U. P. 30 per cent., C.P. 15 per cent., Madras 15 per cent. It has also been agreed to that if in any province two-thirds of a community be against any measure or Bill it should be dropped by both communities.

The Session of 1917-18.—The annual session of the Moslem League was held in Calcutta immediately following the session of the Indian National Congress. Mr. Mahomed Ali had been elected President; in view of his refusal to sign the declaration of unqualified loyalty to the King Emperor demanded as a condition of his release from detention he was not present. The Raja of Mahmudabad presided in his absence. The resolutions passed included:—The endorsement of the National Congress's demand for a time limit to the Parliamentary Bill introducing the proposed reforms. Reservations were added making this endorsement conditional upon the principle of adequate and effective representation of the Moslem community in the reform scheme, as also in the public service and the Government Universities, with a guarantee that the Urdu language and the Persian character should continue in the courts and public offices and primary education in the provinces where they were now in vogue and that facilities, protection and help should be afforded to Moslems in the observance and performance of their religious rites, ceremonies and usages on the occasion of the Bakr-Id, Mohurrum, etc., without restriction or obstruction.

A very important principle emerged from the discussion of the League indicating the real nature of the unity which was declared from the platform. During the year there were violent riots in Bihar when the Mahomedan population was set upon by the Hindu majority and much damage and injury were caused. The following resolution was carried on this point:—

"That the All-India Moslem League views with great alarm the outburst of Hindu fanaticism on the last Bakri-Id and Mohurrum in Behar and Chaurari in Jaunpore district and other places, and condemns the rioters and their secret sympathisers as enemies of the country. This meeting also expresses its deep regret at the silence of responsible Hindu leaders at the occurrences in Behar and Chaurari and is of opinion that their omissions to condemn the campaign of pillage and persecution adopted by their co-religionists is not calculated to make for unity of Hindu and Muslim communities. That the All-India Muslim League expresses its indignation at the failure of the Criminal Investigation Department to obtain timely information of the huge organisation set on foot by a large section of the Hindu population in the districts of Arrah, Gaya and Patna to plunder the houses of Musalmans, to defile and destroy mosques and holy Quran, and to commit other excesses, and refuses to believe that the stupendous anti-cow killing movement could have been organised without the help and co-operation of a number of the Hindu members of the force. This meeting also expresses its deep regret at the weakness shown by the authorities in facing the situation and their omission to adopt drastic measures against the rioters, who carried on pillage from village to village, and is of opinion that by having recourse to strong measures at the outset the spread of the trouble could have been avoided. This meeting further strongly recommends the Government to devise effective means for affording protection to the Muslim community of Behar and the United Provinces in performance of their religious rights in connection with the Bakri-Id."

Scientific Surveys.

The Botanical Survey is under the direction of the Superintendent of the Royal Botanic Garden, Calcutta, with whom are associated the Economic Botanists belonging to the Agricultural Department. In 1912 the post of Reporter on Economic Products was abolished and replaced by that of Economic Botanist to the Botanical Survey. Much of the systematic botanical work of India is done for the department by forest officers and others. Over 2,000 specimens were obtained in 1911-12 by the officer deputed to accompany the Abor Expedition as botanist, and a material addition was made to the information available as to the vegetation of the little-known frontier region traversed.

Geological Survey.—The first object of the Department is the preparation of a general geological map of India. Various economic investigations, which form an increasingly important part of the Department's work, are also conducted. These include investigation of marble and sandstone quarries for the purpose of building Imperial Delhi, the examination of the Korea coal-field in the Central Provinces, of petroliferous localities in the Punjab and North-West Frontier Province, of pitchblende areas in the Gaya District, &c.

Zoological Survey.—A scheme for the formation of a Zoological Survey on the basis of the Zoological and Anthropological Section of the Indian Museum, Calcutta, came into force in July, 1916. The proposals as sanctioned by the Secretary of State mainly are as follows:—The headquarters of the Survey will be the Indian Museum. The scheme regarding the Zoological Survey entails the breaking up of the organisation now known as the Zoological and Anthropological Section of the Indian Museum into two parts, one of which will become a Government department under the title of the Zoological Survey of India, and will be primarily concerned with zoological investigation and exercise such advisory functions as may be assigned to it by Government, while the other part will remain as the office of the Trustees of the Indian Museum and will be organised for the present on the lines laid down in the existing by-laws of the Museum. It will be the duty of the Zoological Survey to act as guardians of the standard zoological collection of the Indian Empire, and as such to give every assistance in their power both to officials and to others, in the identification of zoological specimens submitted to them, arranging, if requested to do so, to send collections to specialists abroad for identification in cases in which no specialist is available in India. The Director of the Survey is Dr. Anandale.

Mammal Survey.—An important movement has recently been inaugurated by the Bombay Natural History Society which has collected subscriptions for a survey of the mammals of India. This Survey was begun in 1911 with the object of getting together properly prepared specimens of all the different kinds of Mammals in India, Burma and Ceylon so that their distribution and differences might be more carefully worked out than had been done before, also to form as complete as possible a collection of specimens for the Society's Museum in Bombay. Before the Survey started the Society had a very small collection, and even in the British Museum in London the Indian specimens were very poorly represented. Three trained collectors from England are in the service of the Society and the specimens obtained by the Survey are being worked out at the British Museum and duplicates presented to the different Indian Museums. In India most of the country has been worked on the West Coast from Coorg as far north as Mount Abu, also the Central Provinces, Kumaon and Bengal. The whole of Ceylon has been worked, and so has a considerable part of Burma. At the present time owing to the war only one collector is in the field in Sikkim, the others having gone to the front. Funds for the Survey were raised by subscription from the principal Native Chiefs and some prominent Bombay citizens together with grants from the Government of India, the Government of Ceylon, the Government of Burma, the Government of the Malay States, and the different local Governments as well as donations from the Royal Society, the British Museum and the Zoological Society of London.

The Board of Scientific Advice.—This Board includes the heads of the Meteorological, Geological, Botanical, Forest, and Survey Departments, representatives of the Agricultural and Civil Veterinary Departments, and other scientific authorities whose special attainments may be useful. It was established in 1902 to co-ordinate official scientific inquiry, to ensure that research work is distributed to the best advantage, and to advise the Government of India in prosecuting practical research into those questions of economic or applied science on the solution of which the agricultural and industrial development of the country so largely depends. The programmes of investigation of the various departments are annually submitted to the Board for discussion and arrangement, and an annual report is published on the work done, as well as a general programme of research for the ensuing year. The reports and the programmes formulated are communicated for consideration to an Advisory Committee of the Royal Society, who from time to time furnish valuable suggestions and advice.

The Secretary to the Government of India (Department of Revenue and Agriculture) is *ex-officio* President of the Board which includes the Director-General of Observatories, the Superintendent of the Indian Museum, the Surveyor-General of India, the Principal, Punjab Veterinary College, the Director of the Indian Institute of Science, the Inspector-General of Forests, the Agricultural Adviser to the Government of India, the Director of the Geological Survey, the Director-General, Indian Medical Service, the Secretary to the Government of India, Public Works Department, and

the Director of the Botanical Survey of India who is Secretary to the Board of Scientific Advice.

The **programme** of the various departments for 1915-16 includes the following: The Meteorological Department will continue observational work with pilot balloons at various stations, and will also do some experimental work on vertical air currents at Agra, besides collating charts representing types of weather, with notes giving explanations and references to other cases of occurrence of the same type for daily weather forecasting. In the Astronomical Department a new spectro-heliograph is under construction which, it is hoped, will be completed during the year. Five more seismographs, two at Simla, two at Calcutta, and one at Bombay, the Avilne Seismograph at Kodaikanal and several instruments of local manufacture at Bombay will be kept in use during the year. A botanical survey is being carried out, and the Economic Botanist will improve and arrange his exhibits. Plant breeding and plant improvement work will be continued on wheat, tobacco, gram, fibre plants, indigo, oilseeds and fruit. Entomology will include general investigations of crop pests and especially of pests of rice, sugarcane, and cotton, fruit trees, and stored grain, while in pathological entomology a closer connection with veterinary work will be aimed at. Under the head of agriculture the following are the lines of work in progress:—Economics of cultivation by steam and motor engines, puddling of rice land by double engine system of steam cultivation, combination of irrigation and drainage in the growing of rice, study of inheritance of the more important characters of dairy cattle by crossing, building up of milk pedigree in cattle by selection.

The Indian Research Fund.—Scientific research work is rapidly developing in India. In 1911 the sum of 5 lakhs (£33,000) out of the surplus opium revenue was set aside as an endowment for research into epidemic diseases in connection with the Central Research Institute, at Kasauli. It was hoped that this sum might be largely augmented by private subscriptions. An Indian Research Fund Association was constituted, and a good deal of work has already been undertaken. Its objects are defined as "the prosecution and assistance of research, the propagation of knowledge and experimental measures generally in connection with the causation, mode of spread and prevention of communicable diseases." Fresh investigations into kala azar and cholera have been inaugurated, and an officer was deputed, at the expense of the Fund, to study yellow fever in the regions where it is endemic, with a view to taking steps to prevent its introduction into India. A further grant of 6 lakhs (£40,000) was made to the Central Research Fund from the opium surplus of 1911-12. It has been decided to devote to research and anti-malarial projects 5 lakhs (£33,000) a year from Imperial revenues commencing in 1913-14. A new periodical, "The Indian Journal of Medical Research," was instituted in 1913 and is published four times annually, as the official organ of the Research Fund. The journal deals with every branch of research directly or indirectly connected with medical and sanitary science, and forms a record of what is being done in India for the advance of this work.

Survey of India.—The work of the Survey of India Department falls under various heads, namely, the trigonometrical survey, topographical and forest surveys, special surveys and explorations, and map production. Cadastral surveys are now carried out by the Provincial Land Records and Settlement Departments.

In 1904 attention was drawn to the defective state of the **topographical survey maps**, and a Committee was appointed to report on the subject. To overtake the arrears of revisional survey and to secure that the map of India should be brought up to date and revised at proper intervals, they recommended a considerable increase of establishment and an increased expenditure of £210,000 a year for the next 25 years. They also made recommendations for altering the size and improving the quality of the maps. After further inquiry the Government of India decided that a scale of 1 inch to the mile would ordinarily be sufficient, reserved forests and special areas being surveyed on the scale of 2 inches to the mile, and the ½-inch scale employed for waste and barren tracts.

THE IMPERIAL INSTITUTE.

The Imperial Institute, South Kensington, has been placed by the Imperial Institute (Management) Act of 1916 under the control of the Secretary of State for the Colonies as representing the central authority for the Dominions, Colonies, and Protectorates of the Empire. The actual management of the Institute will be with an executive council of twenty-five members, which, subject to the general control of the Secretary of State for the Colonies, will possess considerable autonomy and will be the governing body of the Institute. India is to be represented on this council by four members, one nominated by the Government of India, two by the Secretary of State for India, and one by the Secretary of State for the Colonies. In addition, it is understood that there will be a special Indian Committee of the Council with co-opted members—an arrangement which will greatly increase the connection of the Institute with Indian interests and, it is hoped, will promote the development of those activities of the Institute for India which are most needed in England.

An account of the work done by the Institute for India, by Dr. W. R. Dunstan, Director of the Imperial Institute, has lately been published in the *Bulletin* of the Institute.

The **Indian Collections** of the Imperial Institute, which have been completely reorganised in recent years, constitute the Indian Section of the Public Exhibition Galleries. They include a representation of the important raw materials of India, illustrations of its chief industries and their results, tabular information and diagrams respecting Indian trade and commerce, maps, pictures, and photographs of its cities and industries.

Technical Information Bureau.—Ever since the Scientific and Technical Research Department was started, a most important part of its work has been, in addition to conducting researches, to collect and critically collate all published information respecting the production and industrial uses of raw materials, and it has gradually come to be recognized as a central clearing-house for information of this character. Merchants and manufacturers in England, as well as producers in India and the Colonies, have applied in increasing numbers for information on these subjects. In order to be in a position to deal more effectively with such enquiries, a special branch of the department was formed in 1914, whose business it is in collaboration with the staff of the Scientific and Technical Research Department, to collect and distribute technical information. Since the war this branch, known as the Technical Information Bureau, has been very full of work, and has not only dealt with a large number of inquiries as to Indian materials and their possibilities, but has taken the initiative with British manufacturers and merchants in bringing to their notice important Indian materials which await a new market.

The Institute has a library and map rooms, which are important auxiliaries to this work and publishes quarterly the *Bulletin* which has played a conspicuous part in making known throughout the Empire the results of researches conducted at the Institute, and the records of progress in the various aspects of the production and utilisation of commercial and economic materials.

NATIVE PASSENGER SHIPS.

The following Resolution by the Government of India was issued in October 1913, as a result of inquiries set on foot after the loss of the Titanic :—

"The Board of Trade made a comprehensive revision of the scale of boats and life-saving appliance to be provided on board ships in the United Kingdom and appointed committees of experts to deal with collateral questions arising in the same connection. Meanwhile, the maritime local Governments have been consulted as to the necessity for revising the rules which govern vessels in British India, particularly those under the Native Passenger Ships Act, 1887, the Pilgrim Ships Act, 1895, and the Indian Emigration Act, 1908, which are read in the notifications detailed above. The replies show that while a revision is undoubtedly necessary, there is a great divergence of opinion as to the extent to which it is required and the lines on which it should proceed. The subject is one of considerable difficulty and complexity, involving a number of technical and other questions which need careful scrutiny. The Government of India therefore decided to appoint a committee representative of official and non-official interests to enquire generally into the sufficiency of the existing rules and report its views to the Government. The committee consisted of the following President and members:—President, Mr. C. G. Todhunter, I.C.S., Collector, Madras Presidency. Members—the Hon'ble Sir Fazulbhoy Currimbhoy Ebrahim, Bombay; Commander C. J. C. Kendall, D.S.O., R.I.M., Port Officer, Calcutta; Mr. W. H. Ogston, partner in Messrs. Killick, Nixon & Co., Bombay; Captain P. Dest Cronix, Marine Department, British India Steam Navigation Company, Calcutta."

The Committee met at Bombay and subsequently visited other ports. It was to submit its report to the Government of India on the 1st March 1914, but the report has not been published.

Difficulties of the Question—The appointment of the committee was welcomed by the Press, though some criticisms were directed against the apparent narrowness of the scope of the inquiry. The whole subject is one of considerable difficulty and complexity. It is well-known that the standards laid down under the enactments now in force are not adequate to provide accommodation for all on board. It would be invidious to specify any one vessel to illustrate the inadequacy of the present standards, but it may roughly be said that, on the assumption that the cubic capacity which should be provided in life-boats should be at the rate of ten cubic feet per adult, the accommodation now provided will only afford room for 20 to 50 per cent. of the number of passengers carried. The question is further complicated by reason of the fact that of a number of native passenger ships many are never out of sight of land during their voyages, and that any insistence on the principle that there should be life-boat accommodation for all on board will necessarily result in the curtailment of the carrying capacity. It is doubtful therefore whether, in the case of passenger ships which are engaged in the carriage of passengers between ports separated by inconsiderable distances, some relaxation should not be allowed in the matter of providing life-boat accommodation for all on board. The matter is thus essentially one for local investigation.

Working of the Act.—Under the Native Passenger Ships Act (X of 1887) the term "Native Passenger Ships" is applied to sailing-ships, which carry as passengers more than thirty natives of Asia or Africa, and to steam-ships carrying more than sixty such natives. Local Governments have discretionary power, with the sanction of the Governor-General in Council, to alter these numbers to fifteen and thirty, respectively. A long voyage is defined in the Act as a voyage in which the ship will, in ordinary circumstances, be continuously out of port for one hundred and twenty hours or more and a short voyage as one in which the ship will not, in ordinary circumstances, be continuously out of port for one hundred and twenty hours. The space allotted to passengers, and some of her conditions, differ in a long and a short voyage.

The Public Trustee.

The **Public Trustee of England** is a Government Official created by Statute (Public Trustee Act, 1906) whereby the State acts as an executor or as a trustee under Wills, and as a trustee under Settlements, whether these instruments are new or old, and in other offices of an analogous character.

The office has been a great success; in the seven years that it has been open the value of the trusts in course of administration have amounted, in round figures, to £50,000,000, while the estimated value of Wills lodged in the Department which have yet to mature is put at some £59,000,000, showing a total value of business of all kinds negotiated at £110,000,000.

Fees chargeable.—The office is now entirely self-supporting and is no charge upon the tax-payer. A provision of the Statute declares that the Office is to make no profit but to charge only such fees as may provide the working expenses and constitute a reserve fund against the liabilities assumed by the State for breach of trust. In accordance with this mutual principle the fees have already been reduced from their original scale, and the cash surplus of fees over expenses, regarded as the nucleus of a reserve fund for all contingencies, is now £14,585.

The main fees are of two kinds—a fee on capital and a fee on income. The fees on capital are taken in two instalments—an instalment of half taken at the beginning, and another instalment of half taken at the end of a trust—each instalment being calculated at the following rates:—

On the first £1,000, fifteen shillings per cent.

On the excess of £1,000 to £20,000, five shillings per cent.

On the excess of £20,000 to £50,000, two shillings and six pence per cent.

On the excess of £50,000, one shilling and three pences per cent. The **Fee on income** is one per cent. if, as is usual, the income be paid direct from its source to the person entitled, on any income in excess of £2,000 a year the fee is only ½ per cent. Where the income is paid through the Department then the fee is two per cent. up to £500 a year, and one per cent. on any excess of £500 a year, and ½ per cent. on income in excess of £2,000 a year. The fee on investment is ½ per cent.: the Public Trustee, out of this fee paying the brokerage. There is power to vary these fees to meet the peculiar circumstances of special cases; but owing to the low range of the fees, and their mutual character the power of reduction is but seldom exercised, except perhaps in the case of large trusts.

The Department has been organised upon lines followed by commercial organisations. Forms are avoided wherever possible, the methods of the Office prescribing prompt attention to all matters within the day.

The particulars of any trust in which it is desired that the Public Trustee should act may be brought to his notice by letter or by personal interview, and upon his assent being obtained, his appointment should be effected in the ordinary way as in the case of private trustees. In the case of a Will about to be made, his appointment can be secured by the simple provision "I appoint the Public Trustee of England as the executor and trustee of this my Will."

One of the forms of trusteeship which would appeal to English people residing in India is a scheme known as a "**Declaration of Trust.**" An official pamphlet explains that the Public Trustee's services have been requested by people who, either because of professional or business pre-occupation, or from want of experience in dealing with money matters, or from the disadvantages which might attach to Governmental, professional or business disabilities abroad, are not well placed to select and supervise their investments. It would appear that the services of the Department in this matter were first requisitioned by officers taking up appointments in India; and, following out their request for individual assistance, this scheme of trust came to be devised, and has been found to commend itself to the circumstances of a very large circle of persons similarly disadvantaged. A Declaration of Trust is an **inexpensive form of trusteeship** by virtue of which the owner practically retains full control over his capital. The property is made over to the Public Trustee either in the form of money to be invested or specific securities transferred into his name; and thereupon the Public Trustee executes a short "declaration" setting out that he holds the money invested or the securities in trust for the transferor. The result of this is that income, as it accrues is paid to the owner or to any beneficiary as he may direct. A wide field of investment is permissible, as the trust provides that the funds may be invested as the owner may from time to time direct. As the pamphlet sets out interest at the rate of at least 4 per cent. is to be looked for under the scheme from investments of a non-speculative character. It should be understood that this form of trusteeship is not analogous to a bank deposit, where the return of the capital at par, given the solvency of the bank, is expected. Investments are selected with the greatest care in consultation with the owner, but it must be understood that the Public Trustee does not accept responsibility for any fluctuation of any of the investments chosen. The fees payable for this scheme of trusteeship, so far as the capital fees are concerned, are half those payable in the case of an ordinary settlement. The other fees are the same as the ordinary fees.

The appointment of the Public Trustee secures certain definite advantages inasmuch as he is by Act of Parliament a Corporation Sole: and thus it is said the Public Trustee never dies, so that the expense of appointment of other Trustees is permanently avoided. His

integrity is guaranteed by the State, while the measure of his success would indicate that he is necessarily experienced and skilled in his duties.

Close personal attention is given by the Public Trustee and his senior officers to the details of every trust; and as regards the work of investment, a large organisation has been set up to give the best consideration not only to the selection of investments but to the duty of keeping them under frequent observation.

An Advisory Committee of men of recognised authority has, in the past year, been appointed by the Lord Chancellor to assist the Public Trustee by a quarterly review of the investments made. In the last Annual Report the Public Trustee speaks of having secured a return of £3-19-4 per cent. upon his trustee investments and a return of £4-10-1 per cent. upon his non-trustee investments.

The success of the Department would seem to show that there is a widespread public need in England for such an Office, and the energy and efficiency with which the Department has been constituted and conducted has been a great factor in commending it to the public. The State Guarantee is also doubtless a factor of great importance. A statutory rule provides that strict secrecy shall be observed in respect of all trusts administered in the Department.

The administration is subject to an audit by the Controller and Auditor-General (the Government Auditor), while the internal organisation has been built up upon the principle of a check and counter-check upon the administration.

An important section of the Statute gives the Public Trustee power to direct an audit and investigation of the condition and accounts of any trust.

Officials in India will doubtless tend to make an increasing use of the Department. As a Government Office, its stability will commend itself to them as a medium to safeguard their interests under Wills or Settlements which can be entirely relied upon, and free from the risks and expense attendant upon any other forms of trusteeship.

Further information upon details and copies of the official pamphlet, reports and rules, etc., can be obtained of the official agents to the Department, *viz*:—Messrs. King, Hamilton & Co., Calcutta and in Bombay, Messrs. King, King & Co., whose head office is Messrs. Henry S. King & Co., 65, Cornhill, London, E. C.

THE ADMINISTRATOR-GENERAL.

In India the functions of a Public Trustee are divided in each Province between two officials, the Administrator-General and the Official Trustee.

The office of **Administrator-General** was first constituted by Indian Act VII of 1849. There were several later enactments on the subject, all of which have ceased to be in force. The present law is to be found in Indian Act III of 1913, which contains the following provisions:—There are three Administrators-General in each of the Presidencies of Bengal, Madras, and Bombay. Their combined jurisdiction covers the whole of British India. The Administrator-General is entitled to letters of administration, when granted by a High Court, unless they are granted to the next of kin. In the other Courts he is entitled to letters in preference to a creditor, a legatee other than a universal legatee, or a friend of the deceased.

If any person who is not an Indian Christian, a Hindu, Mohammedan, Persian, Buddhist dies leaving within any Presidency assets exceeding the value of Rs. 1,000 and if no person to whom any Court would have jurisdiction to commit administration of such assets has, within one month from his death, applied in such Presidency for probate or letters of administration, the Administrator-General is required to apply for letters of administration. In case of apprehended danger of misappropriation, deterioration, or waste of assets left by the deceased in the towns of Calcutta, Madras, and Bombay, the High Courts may direct the Administrator-General to apply for letters of administration. He can also be required to collect and hold assets until a right of succession or administration is determined. Probate and letters of administration granted to an Administrator-General have effect throughout the Presidency, but the High Court can direct that they have effect throughout one or more of the other Presidencies. A private executor or administrator may with the assent of the Administrator-General transfer the assets of the estate to the Administrator-General. There are provisions in the Act with regard to the revocation of grants and the distribution of assets. When the assets do not exceed Rs. 1,000 in value, the Administrator-General may, when no probate or letters of administration have been granted, give a certificate to a person, claiming otherwise than as a creditor to be interested in such assets, entitling him to receive the assets. There is also power in certain events to give such certificate to a creditor. There is a further power to send the residue of the assets to the country of domicile of the deceased. The Government of India is required by the Act to make good all sums for which the Administrator-General would be personally liable if he had been a private administrator, except where the Administrator-General and his officers have in no way contributed to the liability.

Fees both on capital and on income are payable out of the estates taken charge of by the Administrator-General. The fees on capital vary from 3 per cent. on the gross value in the case of small estates to 2 per cent. in the case of large estates. The fees on income vary in the case of moveable property from 2 per cent. to 3 per cent., and in the case of immovable property from 3 per cent. to 5 per cent. When the Court has directed the Administrator-General to collect and hold the assets a fee of 1 per cent. on the value of the assets taken possession of, collected, realised, or sold is payable. A small fee is also payable in cases where the

Administrator-General grants a certificate. the Administrator has power to reduce the fees to one-half.

Official Trustee.—The office of Official Trustee dates from the year 1843. By Indian Act XVII of that year the Supreme Court had power to appoint the Registrar or other officer of the Court to be a trustee, where there was no trustee willing to act. Act XVII of 1843 was repealed by Act XVII of 1864, which was in its turn repealed by Act II of 1913, which contains the present law on the subject. There are three Official Trustees. The Official Trustee of Bengal has powers in the greater part of India. The powers of the Official Trustee of Bombay extend to the Bombay Presidency and the Province of British Baluchistan; those of the Official Trustee of Madras extend to the Madras Presidency and the Province of Coorg. The Government can appoint Deputy Official Trustees.

An Official Trustee can (*a*) act as an ordinary trustee, (*b*) be appointed trustee by a Court of competent jurisdiction. He has, except as otherwise provided, the same powers, duties, and liabilities as ordinary trustees. He may decline any trust. He may not accept any trust under any composition or scheme of arrangement for the benefit of creditors, nor of any estate known or believed by him to be insolvent. He cannot accept a trust for a religious purpose, or for the management or carrying on of any business. He cannot administer the estate of a deceased person unless he be sole executor and sole trustee under the will. He cannot be appointed trustee along with any other person. With his consent he may be appointed trustee in the instrument making the trust, and he may accept a trust contained in a will. When property is subject to a trust, and there is no trustee within the jurisdiction willing or capable to act, the High Court may appoint the Official Trustee as trustee. He may also be appointed a trustee by the surviving or continuing trustees of a trust, and all persons beneficially interested therein.

As in the case of an Administrator-General, the Government of India is responsible for the acts or defaults of an Official Trustee. Fees are payable at rates fixed by the Government.

PROVING OF WILLS.

In British India if a person has been appointed executor of the will of a deceased person, it is always advisable to prove the will as early as possible. If the will is in a vernacular it has to be officially translated into English. A petition is then prepared praying for the grant of probate of the will. All the property left by the deceased has to be disclosed in a schedule to be annexed to the petition. The values of immoveable properties are usually assessed at 16⅔ years purchase on the nett Municipal assessment. For estate under Rs. 10,000 the probate duty payable is 2 %; between Rs. 10,000 and Rs. 50,000 the duty payable is 2½%. Over 50,000 rupees the duty payable is 3%. In determining the amount of the value of the estate for the purposes of probate duty the following items are allowed to be deducted :—

1. Debts left by the deceased including mortgage encumbrances.
2. The amount of funeral expenses.
3. Property held by the deceased in trust and not beneficially or with general power to confer a beneficial interest.

The particulars of all these items have to be stated in a separate schedule. It is the practice of the High Court to send a copy of these schedules to the Revenue authorities and if the properties particularly immoveable properties have not been properly valued, the Revenue department require the petition to be amended accordingly. In certain cases the Court then requires citations to be published and served on such persons as the Court thinks are interested in the question of the grant of probate. If no objection is lodged by any person so interested within 14 days after the publication or service of citation and if the will is shown to have been properly executed and the petitioner entitled to probate, probate is ordered to be granted.

Freemasonry.

In an Institution so universal as Freemasonry the growth of that body in any particular part of the world is usually similar in all respects to the development in other parts. When Freemasonry was first established in Bombay and became strong enough to have its own Provincial Grand Lodge, the Grand Master of English Freemasons appointed James Todd, a Lieutenant of Police, as the first Provincial Grand Master in 1764. This office he held until 1798, when the Provincial Grand Lodge seems to have gone into abeyance. A revival apparently set in in 1833, and Lodge Orion in the West was founded at Poona. This was followed in 1844 by Lodge St. Andrews at Kamptee and in 1848 by Lodge St. George in Bombay. In 1861 the Provincial Grand Lodge was revived and George Taylor was appointed P. G. M.

In 1870 a fresh warrant was issued by which the Provincial Grand Lodge of Bombay was altered to District Grand Lodge with James Gibbs as D. G. M. The next D. G. M. was Edward Tyrrell Leith who took charge in 1879, and he was followed in 1887 by H. R. H. the Duke of Connaught. The remainder of the District Grand Masters were H. E. Lord Sandhurst 1895-1899, H. E. Lord Northcote 1900-1902, Hon. Sir Lawrence Jenkins 1903-1907 and G. Owen W. Dunn 1908-1911. The present D. G. M. being W. Alban Haig-Brown who was appointed in 1912.

Under the skilful management of these illustrious men the District has grown until now there are under the District Grand Lodge of Bombay 40 Lodges with a total membership of over 2,000.

At the same time the Royal Arch and Mark degrees have also prospered and there are 18 Chapters with a total membership of over 600 and 11 Mark Lodges totalling over 300.

DISTRICT GRAND LODGE E. C.

List of Principal Officers, 1917.

BENGAL.

R. W. District Grand Master, Lord Ronaldshay, G.C.I.E.

Deputy District Grand Master, Col. A. H. D. Creagh, C. M. G.

District Senior Grand Warden, The Hon'ble Mr. Kiran Chunder De, C.I.E.

District Junior Grand Warden, The Hon. Mr. N. D. Beatson Bell, C.I.E.

District Grand Secretary, J. A. Dolton, 19, Park Street, Calcutta.

BOMBAY.

R. W. District Grand Master, W. A. Haig-Brown, J.P.

Deputy District Grand Master, C. B. Robinson, J.P., P.G.D. (Eng.).

District Senior Warden, S. S. K. Gaikwad.

District Junior Grand Warden, Col. W. B. Lane.

District Grand Secretary, J. F. Pennock, V.D., P.A.G.D.C. (Eng.) King's Building, Fort, Bombay.

MADRAS.

R. W. District Grand Master, Hon. Mr. Ll. E. Buckley.

Deputy District Grand Master, C. J. Higgs, P. G. D. (Eng).

District Senior Grand Warden, V. Tirumalai Pillai.

District Junior Grand Warden, Brig.-General H. F. Lock.

District Grand Secretary, J. H. B. Brougham. Mount Road, Madras.

PUNJAB.

Rt. Wor. District Grand Master, Col. Henry. T. Pease, C.I.E., P.G.D. (Eng).

Deputy District Grand Master, Vacant.

District Grand Secretary, David E. Johnston, Freemasons' Hall, Lahore.

BURMAH.

R. W. District Grand Master, The Hon. Mr. Justice E. W. Ormond.

Deputy District Grand Master, W. Kin.

District Senior Grand Warden, W. Archibald.

District Junior Grand Warden, Rev. J. Lister

District Grand Secretary, W. Kindall.

GRAND LODGE OF ALL SCOTTISH FREEMASONRY IN INDIA.

Installation—November (St. Andrew's Day).

COMMUNICATION—4th Saturday, in January, April, July, and October.

PLACE OF MEETING—Freemasons' Hall, Ravelin Street, Bombay.

Grand Master, The Hon'ble Justice Sir Frank Beaman, I.C.S.

Grand Master Depute, Pestonjee M. Kanga.

Substitute Grand Master, L. H. Savile.

Grand Superintendent of Central India, W. E. Jardine, C.I.E., I.C.S.

Grand Superintendent of Eastern India, W. R. Gourlay, I.C.S.

Senior Grand Warden, G. S. Curtis, C.S., I.C.S.

Do. do do. A. N. Thorpe.

Do. do. do. A. Pellym nater.

Junior Grand Warden, C. H. Captain.

Do. do do. Dr. H. P. Joseph.

Do. do. do. D. F Mackie.

G. Secretary—ARTHUR W. WISE, Elphinstone Building, Murzban Road, Fort, Bombay.

BENGAL MASONIC ASSOCIATION.

For Educating Children of Indigent Freemasons.

President.—Lord Ronaldshay, G.C.I.E., *District Grand Master*.

This Association is supported by capitation assessments from the Lodges in the District of Bengal and by voluntary contributions.

1. A donation of Rs. 500 made in one or more payments of not less than Rs. 50 each constitutes the donor a *Vice-President* for *Life* with the privilege of five votes.

2. A donation of Rs. 100 constitutes the donor a *Governor* for *Life*, with the privilege of one vote and one vote for each additional donation of Rs. 100.

3. A subscription of Rs. 16 per annum entitles the subscriber to one vote for the year and an extra vote for every additional Rs. 16.

4. The conditions of the above are the same whether the donor or subscriber be an individual or a Lodge, Chapter, or any other society.

5. A general meeting of subscribers is held twice in the year, at Freemasons' Hall, Calcutta, 19, Park Street.

6. The general conduct of the affairs of the Association is entrusted to a Committee composed of the President, Treasurer, and Secretary, and of five Members to be elected at the February Half-yearly General Meeting.

7. The funds of the Association are devoted solely to the board and education of children.

8. Children are admitted into the Association at the age of seven years and continue therein till they have attained the age of seventeen years.

This rule applies equally to children of both sexes without any distinction of religious denominations.

9. Elections take place at each General Meeting of Subscribers according to the number of vacancies and capabilities of the fund.

10. No child is eligible to be placed on the List of Candidates unless his father has been a Registered Mason for five years and Subscribing Member of some Lodge for at least three years of that period.

Subscriptions and donations are received by the District Grand Secretary and by the Secretary of the Association (Herbert E. Kent, Freemasons' Hall, 19, Park Street), W. J. Bradshaw, *Hon. Treasurer*, *and* Herbert E. Kent, *Secretary*.

BENGAL MASONIC FUND OF BENEVOLENCE.

GRAND COMMITTEE.

President.—Lord Ronaldshay, G.C.I.E., K.C.M.G., *District Grand Master*.

Col. A. H. D. Creagh, C.M.G., *Deputy District Grand Master*.

C. D. Stewart, P.D.G.W.

S. A. Fairweather, *Grand Treasurer*.

J. A. Dolton, *Grand Secretary*.

H. E. Kent, *Asst. Grand Secretary*.

SCOTTISH MASONIC FUND OF BENEVOLENCE.

For the purpose of affording temporary relief to indigent Freemasons and their families.

Grand Secretary—Arthur W. Wise, Elphinstone Building, Murzban Road, Fort, Bombay.

THE SCOTTISH MASONIC BENEVOLENT ASSOCIATION IN INDIA.

(*a*) For the purpose of granting Annuities to old and destitute Freemasons and their widows.

(*b*) Granting allowances towards the maintenance and education of the children of deceased or indigent Freemasons.

J. C. Mistree, *Honorary Secretary and Treasurer*.

THE SIND MASONIC BENEVOLENT ASSOCIATION.

Patron.

Right Wor. Bro. H. E. the Right Hon'ble Lord Lamington, G.C.M.G., G.C.I.E., *Late Grand Master of A. S. F., India, and Governor of Bombay*.

C. H. Chetham, *President*, *Secretary*.—Framroze E. Punthakey, Victoria Street, Predy Quarter, Karachi.

THE BOMBAY MASONIC ASSOCIATION.

For Educating, Clothing and Maintaining the Children of Indigent and Deceased Freemasons.

Subscriptions and donations are received by the Hon. Sec., J. F. Pennock, D. G. S., King's Building, Bombay.

Indian Architecture.

I. ANCIENT.

The architecture of India has proceeded on lines of its own, and its monuments are unique among those of the nations of the world. An ancient civilization, a natural bent on the part of the people towards religious fervour of the contemplative rather than of the fanatical sort, combined with the richness of the country in the sterner building materials—these are a few of the factors that contributed to making it what it was, while a stirring history gave it both variety and glamour. Indian architecture is a subject which at the best has been studied only imperfectly, and a really comprehensive treatise on it has yet to be written. The subject is a vast and varied one, and it may be such a treatise never will be written in the form of one work at any rate. The spirit of Indian art is so foreign to the European of art culture that it is only one European in a hundred who can entirely understand it, while art criticism and analysis is a branch of study that the modern Indian has not as yet ventured upon to any appreciable extent. Hitherto the one, and with a few exceptions the only recognized authority on the subject has been Fergusson, whose compendious work is that which will find most ready acceptance by the general reader. But Fergusson attempted the nearly impossible task of covering the ground in one volume of moderate dimensions, and it is sometimes held that he was a man of too purely European a culture, albeit wide and eclectic, to admit of sufficient depth of insight in this particular direction. Fergusson's classification by races and religions is, however, the one that has been generally accepted hitherto. He asserts that there is no stone architecture in India of an earlier date than two and a half centuries before the Christian era, and that "India owes the introduction of the use of stone for architectural purposes, as she does that of Buddhism as a state religion, to the great Asoka, who reigned B.C. 272 to 236."

Buddhist Work.

Fergusson's first architectural period is then the Buddhist, of which the great tope at Sanchi with its famous Northern gateway is perhaps the most noted example. Then we have the Gandharan topes and monasteries. Perhaps the examples of Buddhist architecture of greatest interest and most ready access to the general student are to be found in the Chaitya halls or rock-cut caves of Karli, Ajunta, Nasik, Ellora and Kanheri. A point with relation to the Gandhara work may be alluded to in passing. This is the strong European tendency, variously recognized as Roman, Byzantine but most frequently as Greek, to be observed in the details. The foliage seen in the capitals of columns bears strong resemblance to the Greek acanthus, while the sculptures have a distinct trace of Greek influence, particularly in the treatment of drapery, but also of hair and facial expression. From this it has been a fairly common assumption amongst some authorities that Indian art owed much of its best to European influence, an assumption that is strenuously combated by others as will be pointed out later.

The architecture of the Jains comes next in order. Of this rich and beautiful style the most noted examples are perhaps the Dilwara temples near Mount Abu, and the unique "Tower of Victory" at Chittore.

Other Hindu Styles.

The Dravidian style is the generic title usually applied to the characteristic work of the Madras Presidency and the South of India. It is seen in many rock-cut temples as at Ellora; where the remarkable "Kylas" is an instance of a temple cut out of the solid rock, complete, not only with respect to its interior (as in the case of mere caves) but also as to its exterior. It is, as it were, a life-size model of a complete building or group of buildings, several hundred feet in length, not built, but sculptured in solid stone, an undertaking of vast and, to our modern ideas, unprofitable industry. The Pagoda of Tanjore, the temples at Srirangam, Chidambaram, Vellore, Vijayanagar, &c., and the palaces at Madura and Tanjore are among the best known examples of the style.

The writer finds some difficulty in following Fergusson's two next divisions of classification, the "Chalukyan" of South-central India; and the "Northern or Indo-Aryan style." The differences and the similarities are apparently so intermixed and confusing that he is fain to fall back on the broad generic title of "Hindu"—however unscientific he may thereby stand confessed. Amongst a vast number of Hindu temples the following may be mentioned as particularly worthy of study:—Those at Mukteswara and Bhuvaneswar in Orissa, at Khajuraho, Bindrabun, Udaipur, Benares, Gwalior, &c. The palace of the Hindu Raja Man Singh at Gwalior is one of the most beautiful architectural examples in India. So also are the palaces of Amber, Datiya, Urcha, Dig and Udaipur.

Indo-Saracenic.

Among all the periods and styles in India the characteristics of none are more easily recognizable than those of what is generally called the "Indo-Saracenic" which developed after the Mahomedan conquest. Under the new influences now brought to bear on it the architecture of India took on a fresh lease of activity and underwent remarkable modifications. The dome, not entirely an unknown feature hitherto, became a special object of development, while the arch, at no time a favourite constructional form of the Hindu builders, was now forced on their attention by the predilections of the ruling class. The minaret also became a distinctive feature. The requirements of the new religion,—the mosque with its wide spaces to meet the needs of organized congregational acts of worship—gave opportunities for broad and spacious treatments that had hitherto been to some extent denied. The Moslem hatred of idolatry set a tabu on the use of sculptured representations of animate objects in the adornment of the buildings, and led to the development

of other decorative forms. Great ingenuity came to be displayed in the use of pattern and of geometrical and foliated ornament. This Moslem trait further turned the attention of the builders to a greater extent than before to proportion, scale and mass as means of giving beauty, mere richness of sculptured surface and the aesthetic and symbolic interest of detail being no longer to be depended on to the same degree.

The art was thus the gainer by the new conditions. It gained in power and variety much as "Classic" architecture gained under the Romans. But it equally lost something too. The Indo-Saracenic is apt to appear cold and hard. The writer was impressed by this on his first view of the Gwalior palace already mentioned. Though a Hindu building that palace has yet much of what might be called the more sophisticated quality of the Indo-Saracenic work as well as some similarity of detail. It has, being Hindu, a certain amount of sculptured ornament of animated forms, and the general effect of roundness, richness and interest thereby imparted seemed eloquent in suggestion as to what is lacking in so many of the Mahometan buildings.

Foreign Influence.

There would appear to be a conflict between archæologists as to the extent of the effect on Indian art produced by foreign influence under the Mahometans. The extreme view on the one hand is to regard all the best of the art as having been due to foreign importation. The Gandharan sculptures with their Greek tendency, the development of new forms and modes of treatment to which allusion has been made, the similarities to be found between the Mahometan buildings of India and those of North Africa and Europe, the introduction of the minaret and, above all, the historical evidences that exist of the presence in India of Europeans during Mogul times, are cited in support of the theory. On the other hand those of the opposite school hold the foregoing view to be due to the prevailing European preconception that all light and leading must come by way of Europe, and the best things in art by way of Greece. To them the Gandharan sculpture, instead of being the best, is the worst in India even because of its Greek tincture. They find in the truly indigenous work beauties and significances not to be seen in the Graeco-Bactrian sculptures, and point to those of Borobudur in Java, the work of Buddhist colonists from India, wonderfully preserved by reason of an immunity from destructive influences given by the insular position, as showing the best examples of the art extant. It is probable that a just estimate of the merits of the controversy, with respect to sculpture at any rate, cannot be formed till time has obliterated some of the differences of taste that exist between East and West.

To the adherents of the newer school the undisputed similarities between Indo-Mahometan and Hindu buildings outweigh those between Indian and Western Mahometan work, especially in the light of the dis-similarities between the latter. They admit the changes produced by the advent of Islam, but contend that the art, though modified, yet remained in its essence what it had always been, indigenous Indian. The minaret, the dome, the arch, they contended, though developed under the Moslem influence, were yet, so far as their detailed treatment and craftsmanship are concerned, rendered in a manner distinctively Indian. Fergusson is usually regarded as the leader of the former school, while the latter and comparatively recent school has at present found an eager champion in Mr. E. B. Havell, whose works, on the subject are recommended for study side by side with those of the former writer. Mr. Havell practically discards Fergusson's racial method of classification into styles in favour of a chronological review of what he regards to a greater extent than did his famous precursor as being one continuous homogeneous Indian mode of architectural expression, though subject to variations from the influences brought to bear upon it and from the varied purposes to which it was applied.

Agra and Delhi.

Agra and Delhi may be regarded as the principal centres of the Indo-Saracenic style—the former for the renowned Taj Mahal, for Akbar's deserted capital of Fatehpur Sikri, his tomb at Secundra, the Moti Musjid and palace buildings at the Agra fort. At Delhi we have the great Jumma Musjid, the Fort, the tombs of Humayon, Sufdar Jung, &c.; and the unique Qutb Minar. Two other great centres may be mentioned, because in each there appeared certain strongly marked individualities that differentiated the varieties of the style there found from the variety seen at Delhi and Agra, as well as that of one from that of the other. These are Ahmedabad in Gujarat and Bijapur on the Dekhan, both in the Bombay Presidency.

Ahmedabad.

At Ahmedabad with its neighbours Sirkhej and Champanir there seems to be less of a departure from the older Hindu forms, a tendency to adhere to the lintel and bracket rather than to have recourse to the arch, while the dome though constantly employed, was there never developed to its full extent as elsewhere, or carried to its logical structural conclusion. The Ahmedabad work is probably most famous for the extraordinary beauty of its stone "jali"—or pierced lattice-work, as in the palm tree windows of the Sidi Sayyid Musjid.

Bijapur.

The characteristics of the Bijapur variety of the style are equally striking. They are perhaps more distinctively Mahometan than those of the Ahmedabad buildings in that here the dome is developed to a remarkable degree, indeed the tomb of Mahmud—the well-known "Gol Gumbaz"—is cited as shewing the greatest space of floor in any building in the world roofed by a single dome, not even excepting the Pantheon. The lintel also was here practically discarded in favour of the arch. The Bijapur style shews a bold masculine quality and a largeness of structural conception that is unequalled elsewhere in India; though in richness and delicacy it does not attempt to rival the work of the further North. In this we recognize among other influences

that of the prevailing material, the hard uncompromising Dekhan basalt. In a similar manner the characteristics of the Ahmedabad work with its greater richness of ornamentation are bound up with the nature of the Gujarát freestone, while at Delhi and Agra the freer choice of materials available—the local red and white sandstones, combined with access to marble and other more costly materials—was no doubt largely responsible for the many easily recognizable characteristics of the architecture of these centres.

II. MODERN.

The modern architectural work of India divides itself sharply into two classes. There is first that of the indigenous Indian "Master-builder" to be found chiefly in the Native States, particularly those in Rajputana. Second there is that of British India, or of all those parts of the peninsula wherever Western ideas and methods have most strongly spread their influence, chiefly, in the case of architecture, through the medium of the Department of Public Works. The work of that department has been much animadverted upon as being all that building should not be, but, considering it has been produced by men of whom it was admittedly not the *metier*, and who were necessarily contending with lack of expert training on the one hand and with departmental methods on the other, it must be conceded that it can shew many notable buildings. Of recent years there has been a tendency on the part of professional architects to turn their attention to India, and a number of these has even been drafted into the service of Government as the result of a policy initiated in Lord Curzon's Viceroyalty. In time, therefore, and with the growth of the influence of these men, such of the reproach against the building of the British in India as was just and was not merely thoughtlessly maintained as a corollary to the popular jape against everything official, may gradually be removed. If this is so as to Government work progress should be even more assured in the freer atmosphere outside of official life. Already in certain of the greater cities, where the trained modern architect has established himself, in private practice, there are signs that his influence is beginning to be felt. He still complains, however, that the general public of India needs much educating up to a recognition of his value, both in a pecuniary sense and otherwise. It is also to be observed that the survival of a relic of the popular idea of the time before his advent, to the effect that though an architect might occasionally "design" a building it was always an engineer who built it, is still indicated by the architect in some cases deeming it advisable to style himself "architect and engineer."

To the work of the indigenous "master-builder" public attention has of recent years been drawn with some insistence, and the suggestion has been pressed that efforts should be directed towards devising means for the preservation of what is pointed out—and now universally acknowledged— to be a remarkable survival—almost the only one left in the world—of "living art," but which is threatened with gradual extinction by reason of the spread of Western ideals and fashions. The matter assumed some years ago the form of a mild controversy centring round the question of the then much discussed project of the Government of India's new capital at Delhi. It was urged that this project should be utilised to give the required impetus to Indian art rather than that it should be made a means of fostering European art which needed no such encouragement at India's expense. The advocates of this view appear for the most part to have been adherents of the "Indigenous Indian" school of archæologists already mentioned, and to have based their ideas on their own reading of the past. They still muster a considerable following not only amongst the artistic public of England and India, but even within the Government services. Their opponents, holding what appears to be the more official view both as to archæology and art, have pointed to the "death" of all the arts of the past in other countries as an indication of a natural law, and deprecate as waste of energy all efforts to resist this law, or to institute what they have termed "another futile revival." The British in India they contend, should do as did the ancient Romans in every country on which they planted their conquering foot. As those were wont to replace indigenous art with that of Rome, so should we set our seal of conquest permanently on India by the erection of examples of the best of British art. This is the view which, as we have indicated, appears to have obtained for the moment the more influential hearing, and the task of designing and directing the construction of the principal buildings in the new Capital has accordingly been entrusted jointly to a London and to a South African architect, neither of whom can be unduly influenced by either past or recent architectural practice so far as India is concerned.

The results cannot but be awaited with the keenest interest, and meanwhile the controversy, with suspended judgment, naturally falls into abeyance. It is, moreover, however vital to the interests of the country's architecture, too purely technical and academic for its merits to be estimated by the general reader or discussed here. Its chief claim on our attention has in the fact that it affords an added interest to the tourist, who may see the fruits of both schools of thought in the various modern buildings of British India as well as examples of the "master builders" work in nearly every native town and bazaar. The town of Lashkar in Gwalior State may be cited as peculiarly rich in instances of picturesque modern Indian street architecture, while at Jaipur, Udaipur, Benares, etc., this class of work may be studied in many different forms both civil and religious. The extent to which the "unbroken tradition from the past" exists may there be gauged by the traveller who is architect enough for the purpose.

Archæology.

The archæological treasures of India are as varied as they are numerous. Those of the pre-Muhammadan period may roughly be divided into (1) architectural and sculptural monuments and (2) inscriptions. No building or sculpture in India with any pretentions to be considered an example of architecture or art can be ascribed to a time earlier than that of Asoka (circa 250 B.C.). In the pre-Asoka architecture of India, as in that of Burma or China at the present day, wood was solely or almost solely employed. Even at the close of the 4th century, B.C., Megasthenes, the Greek Ambassador at the court of Chandragupta, grandfather of Asoka, describes Pataliputra, the capital of the Indian monarch, as "surrounded by a wooden wall pierced with loop-holes for the discharge of arrows." If the capital itself was thus defended, we can easily infer that the architecture of the period was wooden. And long long after stone was introduced the lithic styles continued to be influenced by, or copied from, the wooden.

Monumental Pillars.—The first class of works that we have to notice are the monumental pillars, known as *lats*. The oldest are the monolithic columns of Asoka, nearly thirty in number, of which ten bear his inscriptions. Of these the Lauriya-Nandangarh column in the Champaran District, Tirhut, is practically uninjured. The capital of each column, like the shaft, was monolithic, and comprised three members, *viz.*, a Persepolitan bell, abacus, and crowning sculpture in the round. By far the best capital of Asoka's time was that exhumed at Sarnath near Benares. The four lions standing back to back on the abacus are carved with extraordinary precision and accuracy. Of the post-Asokan period one pillar (B.C. 150) stands to the north-east of Besnagar in the Gwalior State, another in front of the cave of Karli (A.D. 70), and a third at Eran in Central Provinces belonging to the 5th Century, A. D. All these are of stone; but there is one of iron also. It is near the Qutb Minar at Delhi, and an inscription on it speaks of its having been erected by a king called Chandra, identified with Chandragupta II. (A.D. 375-413) of the Gupta dynasty. It is wonderful "to find the Hindus at that age forging a bar of iron larger than any that have been forged even in Europe to a very late date, and not frequently even now." Pillars of later style are found all over the country, especially in the Madras Presidency. No less than twenty exist in the South Kanara District. A particularly elegant example faces a Jaina temple at Mudabidri, not far from Mangalore.

Topes.—*Stupas*, known as *dagabas* in Ceylon and commonly called Topes in North India, were constructed either for the safe custody of relics hidden in a chamber often near the base or to mark the scene of notable events in Buddhist or Jaina legends. Though we know that the ancient Jainas built *stupas*, no specimen of Jaina *stupas* is now extant. Of those belonging to the Buddhists, the great Tope of Sanchi in Bhopal, is the most intact and entire of its class. It consists of a low circular drum supporting a hemispherical dome of less diameter. Round the drum is an open passage for circumambulation, and the whole is enclosed by a massive stone railing with lofty gates facing the cardinal points. The gates are essentially wooden in character, and are carved, inside and out, with elaborate sculptures. The *stupa* itself probably belonged to the time of Asoka, but as Sir John Marshall's recent explorations have conclusively shown, the railing and the gateways were at least 150 and 200 years later, respectively. Other famous Buddhist *stupas* that have been found are those of Bharhut between Allahabad and Jubbulpore, Amravati in the Madras Presidency, and Piprahwa on the Nepalese frontier. The tope proper at Bharhut has entirely disappeared, having been utilised for building villages, and what remained of the rail has been removed to the Calcutta Museum. The bas-reliefs on this rail which contain short inscriptions and thus enable one to identify the scenes sculptured with the *Jatakas* or Birth Stories of Buddha give it a unique value. The *stupa* at Amravati also no longer exists, and portions of its rail, which is unsurpassed in point of elaboration and artistic merit, are now in the British and Madras Museums. The *stupa* at Piprahwa was opened by Mr. W. C. Peppe in 1898, and a steatite or soap-stone reliquary with an inscription on it was unearthed. The inscription, according to many scholars, speaks of the relics being of Buddha and enshrined by his kinsmen, the Sakyas. And we have thus here one of the *stupas* that were erected over the ashes of Buddha immediately after his demise.

Caves.—Of the rock excavations which are one of the wonders of India, nine-tenths belong to Western India. The most important groups of caves are situated in Bhaja Bedsa, Karli, Kanheri, Junnar, and Nasik in the Bombay Presidency, Ellora and Ajanta in Nizam's Dominions, Barabar 16 miles north of Gaya, and Udayagiri and Khandagiri 20 miles from Cuttack in Orissa. The caves belong to the three principal sects into which ancient India was divided, *viz.*, the Buddhists, Hindus and Jainas. The earliest caves so far discovered are those of Barabar which were excavated by Asoka and his grandson Dasaratha, and dedicated to Ajivikas, a naked sect founded by Makkhali Gosala. This refutes the theory that cave architecture was of Buddhist origin. The next earliest caves are those of Bhaja, Pitalkhora and cave No. 9 at Ajanta and No. 19 at *Nasik*. They have been assigned to 200 B.C. by Fergusson and Dr. Burgess. But there is good reason to suppose from Sir John Marshall's recent researches and from epigraphic considerations that they are considerably more modern. The Buddhist caves are of two types—the *chaityas* or chapel caves and *viharas* or monasteries for the residence of monks. The first are with vaulted roofs and horse-shoe shaped windows over the entrance and have interiors consisting of a nave and side aisles with a small *stupa* at the inner circular end. They are thus remarkably similar to Christian basilicas. The second class consist of a hall surrounded by a number of cells. In the later *viharas* there was a sanctum in the centre of the back wall containing a large image of Buddha. Hardly a *chaitya* is found without one or more *viharas* adjoining it. Of the Hindu cave tem-

ples that at Elephanta near Bombay is perhaps the most frequented. It is dedicated to Siva and is not earlier than the 7th century A.D. But by far the most renowned cave-temple of the Hindus is that known as Kailasa at Ellora. It is on the model of a complete structural temple but carved out of solid rock. It also is dedicated to Siva and was excavated by the Rashtrakuta king, Krishna I, (A. D. 768), who may still be seen in the paintings in the ceilings of the upper porch of the main shrine. Of the Jaina caves the earliest are at Khandgiri and Udayagiri; those of the mediæval type, in Indra Sabha at Ellora; and those of the latest period, at Ankai in Nasik. The ceilings of many of these caves were once adorned with fresco paintings. Perhaps, the best preserved among these are those at Ajanta, which were executed at various periods between 350-650 A.D. and have elicited high praise as works of art. Copies were first made by Major Gill, but most of them perished by fire at the Crystal Palace in 1866. The lost ones were again copied by John Griffiths of the Arts School, Bombay, half of whose work was similarly destroyed by a fire at South Kensington. They were last copied by Lady Herringham during 1909-11. Her pictures, which are in full scale, are at present exhibited at the Indian Section of the Victoria and Albert Museum, South Kensington, and have been reproduced in a volume brought out by the India Society.

Gandhara Monuments.—On the north-west frontier of India, anciently known as Gandhara, are found a class of remains, ruined monasteries and buried *stupas*, among which we notice for the first time representations of Buddha and the Buddhist pantheon. The free use of Corinthian capitals, friezes of nude Erotes bearing a long garland, winged Atlantes without number, and a host of individual motifs clearly establish the influence of Hellenistic art. The mound at Peshawar, locally known as Shah-ji-ke-Dheri, which was explored in 1909, brought to light several interesting sculptures of this school together with a reliquary casket, the most remarkable bronze object of the Gandhara period. The inscription on the casket left no doubt as to the mound being the *stupa* raised over the bones of Buddha by the Indo-Scythian king Kanishka. They were presented by Lord Minto's Government to the Buddhists of Burma and are now enshrined at Mandalay. To about the same age belong the *stupas* at Manikyala in the Punjab opened by Ranjit Singh's French Generals, Ventura and Court, in 1830. Some of them contained coins of Kanishka.

Structural Temples.—Of this class we have one of the earliest examples at Sanchi, and another at Tigowa in the Central Provinces. In South India we have two more examples, *viz.*, Lad Khan and Durga temples at Aihole in Bijapur. All these belong to the early Gupta period and cannot be later than 500 A.D. The only common characteristic is flat roofs without spires of any kind. In other respects they are entirely different and already here we mark the beginning of the two styles, Indo-Aryan and Dravidian, whose differences become more and more pronounced from the 7th century onwards. In the Indo-Aryan style, the most prominent lines tend to the perpendicular, and in the Dravidian to the horizontal. The salient feature of the former again is the curvilinear steeple, and of the latter, the pyramidal tower. The most notable examples of the first kind are to be found among the temples of Bhubaneswar in Orissa, Khajarah in Bundelkhand, Osia in Jodhpur, and Dilwara on Mount Abu. One of the best known groups in the Dravidian style is that of the Mamallapuram Raths, of 'Seven Pagodas', on the seashore to the south of Madras. They are each hewn out of a block of granite, and are rather models of temples than *raths*. They are the earliest examples of typical Dravidian architecture, and belong to the 7th century. To the same age has to be assigned the temple of Kailasanath at Conjeeveram, and to the following century some of the temples at Aihole and Pattadkal of the Bijapur District, Bombay Presidency, and the monolithic temple of Kailasa at Ellora, referred to above. Of the later Dravidian style the great temple at Tanjore and the Srirangam temple of Trichinopoly are the best examples.

Intermediate between these two main styles comes the architecture of the Deccan, called Chalukyan by Fergusson. In this style the plan becomes polygonal and star-shaped instead of quadrangular; and the high-storeyed spire is converted into a low pyramid in which the horizontal treatment of the Dravidian is combined with the perpendicular of the Indo-Aryan. Some fine examples of this type exist, at Dambal, Rattihâli, Tilliwalli and Hangal in Dharwar, Bombay Presidency, and at Ittagi and Warangal in Nizam's Dominions. But it is in Mysore among the temples at Hallebid, Belur, and Somnathpur that the style is found in its full perfection.

Inscriptions.—We now come to inscriptions, of which numbers have been brought to light in India. They have been engraved on varieties of materials, but principally on stone and copper. The earliest of these are found incised in two distinct kinds of alphabet, known as Brahmi and Kharoshthi. The Brahmi was read from left to right, and from it have been evolved all the modern vernacular scripts of India. The Kharoshthi was written from right to left, and was a modified form of an ancient Aramaic alphabet introduced into the Punjab during the period of the Persian domination in the 5th century, B.C. It was prevalent up to the 4th century, A.D., and was supplanted by the Brahmi. The earliest dateable inscriptions are the celebrated edicts of Asoka. One group of these has been engraved on rocks, and another on pillars. They have been found from Shahbazgarhi 40 miles north-east of Peshawar to Nigliva in the Nepal Tarai, from Girnar in Kathiawar to Dhauli in Orissa, from Kalsi in the Lower Himalayas to Siddapur in Mysore, showing by the way the vast extent of territory held by him. The reference in his Rock Edicts to the five contemporary Greek Princes, Antiochus II. of Syria, Ptolemy Philadelphus, and so forth is exceedingly interesting, and fixes B.C. 269 as the date of his coronation. His Rummindei *pillar inscription*, again, discovered in Nepal Tarai, now settles, beyond all doubt, the birth-place of Buddha which was for long disputed. Another noteworthy record is the inscription of the Besnagar pillar. The pillar had been known for a long time, but Sir John

Marshall was the first to notice the inscription on it. It records the erection of this column, which was a Garuda pillar, in honour of the god Vasudeva by one Heliodoros, son of Dion, who is described as an envoy of King Antialkidas of Taxila. Heliodorous is herein called a *Bhagavata*, which shows that though a Greek he had become a Hindu and presumably a Vaishnava. Another inscription worth noticing and especially in this connection is that of Cave No. 10 at Nasik. The donor of this cave, Ushavadata, who calls himself a Saka and was thus an Indo-Scythian, is therein spoken of as having granted three hundred thousand kine and sixteen villages to gods and Brahmans and as having annually fed one hundred thousand Brahmans. Here is another instance of a foreigner having embraced Hinduism. Thus for the political, social, economical and religious history of India at the different periods the inscriptions are invaluable records, and are the only light but for which we are 'forlorn and blind.'

Saracenic Architecture.—This begins in India with the 13th century after the permanent occupation of the Muhammadans. Their first mosques were constructed of the materials of Hindu and Jaina temples, and sometimes with comparatively slight alterations. The mosque called *Adhai-din-ka-jhompra* at Ajmer and that near the Qutb Minar are instances of this kind. The Muhammadan architecture of India varied at different periods and under the various dynasties, imperial and local. The early Pathan architecture of Delhi was massive and at the same time was characterised by elaborate richness of ornamentation. The Qutb Minar and tombs of Altamsh and Ala-ud-din Khilji are typical examples. Of the Sharqi style we have three mosques in Jaunpur with several tombs. At Mandu in the Dhar State, a third form of Saracenic architecture sprung up, and we have here the Jami Masjid, Hoshang's tomb, Jahaz Mahall and Hindola Mahall as the most notable instances of the secular and ecclesiastical styles of the Malwa Pathans. The Muhammadans of Bengal again developed their own style, and Pandua, Malda, and Gaur teem with the ruins of the buildings of this type, the important of which are the Adina Masjid of Sikandar Shah, the Elakhi mosque, Kadam Rasul Masjid, and so forth. The Bahmani dynasty of Gulbarga and Bidar were also great builders, and adorned their capitals with important buildings. The most striking of these is the great mosque of Gulbarga, which differs from all mosques in India in having the whole central area covered over so that what in others would be an open court is here roofed by sixty-three small domes. "Of the various forms which the Saracenic architecture assumed," says Fergusson, "that of Ahmedabad may probably be considered to be the most elegant." It is notable for its carved stone work; and the work of the perforated stone windows in Sidi Sayyid's mosque, the carved niches of the minars of many other mosques, the sculptured *Mihrabs* and domed and panelled roofs is so exquisite that it will rival anything of the sort executed elsewhere at any period. No other style is so essentially Hindu. In complete contrast with this was the form of architecture employed by the Adil Shahi dynasty of Bijapur. There is here relatively little trace of Hindu forms or details. The principal buildings now left at Bijapur are the Jami Masjid, Gagan Mahall, Mihtar Mahall, Ibrahim Rauza and mosque and the Gol Gumbaz. Like their predecessors, the Pathans of Delhi, the Moghuls were a great building race. Their style first began to evolve itself during the reign of Akbar in a combination of Hindu and Muhammadan features. Noteworthy among the emperor's buildings are the tomb of Humayun, and the palaces at Fatehpur, Sikri and Agra. Of Jehangir's time his mosque at Lahore and the tomb of Itimad-ud-daula are the most typical structures. "The force and originality of the style gave way under Shah Jahan to a delicate elegance and refinement of detail." And it was during his reign that the most splendid of the Moghul tombs, the Taj Mahal at Agra, the tomb of his wife Mumtaz Mahall, was constructed. The Moti Masjid in Agra Fort is another surpassingly pure and elegant monument of his time.

Archæological Department.—As the archæological monuments of India must attract the attention of all intelligent visitors, they would naturally feel desirous to know something of the Archæological Department. The work of this Department is primarily two-fold, conservation, and research and exploration. None but spasmodic efforts appear to have been made by Government in these directions till 1870 when they established the Archæological Survey of India and entrusted it to General (afterwards Sir) Alexander Cunningham, who was also the first Director-General of Archæology. The next advance was the initiation of the local Surveys in Bombay and Madras three years after. The work of these Surveys, however, was restricted to antiquarian research and description of monuments, and the task of conserving old buildings was left to the fitful efforts of the local Governments, often without expert guidance or control. It was only in 1878 that the Government of India under Lord Lytton awoke to this deplorable condition, and sanctioned a sum of 3½ lakhs to the repair of monuments in United Provinces, and soon after appointed a conservator, Major Cole, who did useful work for three years. Then a reaction set in, and his post and that of the Director-General were abolished. The first systematic step towards recognising official responsibility in conservation matters was taken by Lord Curzon's Government, who established the seven Archæological Circles that now obtain, placed them on a permanent footing, and united them together under the control of a Director-General, provision being also made for subsidising local Governments out of imperial funds, when necessary. The Ancient Monuments Preservation Act was passed for the protection of historic monuments and relics especially in private possession and also for State control over the excavation of ancient sites and traffic in antiquities. Under the direction of Sir John Marshall, Kt., C.I.E., Director-General of Archæology, a comprehensive and systematic campaign of repair has been prosecuted, and the result of it is manifest in the present altered conditions of old buildings. One has only to see for example the Moghul buildings at Agra, Delhi, Lahore and Ajmer, in order to be convinced how the work of careful reconstruc-

tion and repair has converted these decayed and desecrated monuments with their modern excrescences into edifices of unrivalled loveliness. Another noteworthy feature of this work has been the rescue of many of these buildings from profane and sacrilegious uses. It is well-known that the superb Pearl Mosque of Jahangir in the Lahore Fort contained a Government treasury, and the Sleeping Hall of Shah Jahan served as a Church for the British troops. At Bijapur two mosques have been recovered, one of which was used as Dak Bungalow and the other as Post Office. The local Kutcherry has now been expelled from the lovely musjid of Sidi Sayyid at Ahmedabad. The Cave temples at Trichinopoly are no longer godowns. Nor has research work been in any way neglected under the new order of things. A unique feature of it for the first time introduced under the guidance and advice of Sir John Marshall has been the scientific excavation of buried sites, such as Sarnath where Buddha preached his first sermon, Kasia or Kusinara where he died, Saheth-Maheth the ancient Srasvasti, Taxila or Takshasila; the seat of the ancient Hindu University, Patna or Pataliputra, the Mauryan capital, Besnagar or the ancient Vidisa, and so forth. The results achieved, especially at the last three places, are of a sensational character. At Taxila Sir John has brought to light the remains of a palace of the Assyrian style and a massive and imposing temple dedicated to Zoroastrian worship and resembling a Greek peripteral temple with the addition of a solid tower of the Likkurat type rising behind the shrine. At Patna Dr. D. B. Spooner has found traces of a Mauryan palace which is an actual replica of the Achæmenian palace at Persepolis. At Besnagar Mr. D. R. Bhandarkar has excavated a temple of Vasudeva of the third century B.C., which proves to be the oldest of all Hindu shrines in India. Among other results of this excavation is the noteworthy discovery that the art of forging steel was practised in India more than two thousand years ago and that mortar was used in the construction of brick masonry at least as early as the third century B.C.

Indian Art.

Within the last few years there has been a most interesting and promising, though somewhat narrowly confined, revival in Indian Art. For this, it is to be feared, scant credit is due to British educational policy in India, though the impetus has come mainly from a few British and other European enthusiasts who have reminded cultured India of the value of its ancient artistic heritage and indicated the possibilities of revival. Each year between 6,000 and 7,000 students pass the various examinations of the four Schools of Arts maintained by the State, but until very recently those institutions have been in some respects seriously mistaken in ideal and method. Viewing their work over half a century it may be said broadly that they have paid very inadequate attention to the traditions of Indian Art, and that in consciously or unconsciously encouraging Western influences, which the Indian student could not thoroughly assimilate, they have not even been particular to choose good examples of Western art. Nor have the Schools of Arts been altogether free from the taint of commercialism; indeed, for some years one of them was in effect something between an industrial workshop and an emporium for selling Indian curiosities nicely designed to meet the taste of tourists. In justice to the Schools it should be added that they have seldom been able to attract into them members of the hereditary craftsmen class. The material they have had to work with has been unpromising. Further, even for students who might attain to conspicuous skill, there have been few openings in after-life. All this is now changing, but the improvement began only some fifteen years ago, and it is mainly due to agencies more or less independent of the schools.

A Notable Revival.

The revival which has already produced one notable artist, Mr. Abanindranath Tagore, is the direct outcome of the study of the work of the best periods of Indian art. In order to comprehend it, it is therefore necessary to glance back over the history of art in India. With sculpture we are here not particularly concerned, for there is no perceptible revival in it at present; but it may be said in passing that its golden age in India was the period which produced the sculptures of Ellora and Elephanta, that in its finest examples this art was genuinely Indian, for the Gandhara sculptures, which show strong Greek influence, are inferior enough to make the contention that India owed much to Greece absurd, and that perhaps the finest "Indian" sculpture is to be found in Java, where at Borobudur, in the eighth and ninth centuries A.D. the descendants of Indian emigrants wrought a long series of mighty masterpieces. As regards paintings, we begin with those at Ajanta, produced at intervals between the first century before Christ and perhaps the seventh century of the Christian era. A typical example, in which a mother and her child supplicating Buddha are presented not only with much technical skill but with tenderness of feeling, may be found reproduced in Griffith's book on Ajanta and in Mr. Havell's "Indian Sculpture and Painting." These paintings are true frescoes, differing in method from the Italian in little but the use of mechanical as well as chemical combination of colours.

Practically all the work of this time has perished, and of the secular art of the period before the Moguls there is scant vestige. With the Moguls for the first time painting becomes frankly secular. Whereas a Hindu philosopher had laid it down that it was iniquitous to represent natural objects when the divinities could be made the artist's subjects, the Islamic dislike of idolatry naturally conduced to the development of secular painting. These Mogul artists were Persians or others, more

or less under the influence of the Persian school. Akbar patronised them liberally, and Abul Fazl, his histriographer, records the triumphs of Mir Sayyid Ali, a Persian, and Daswanth, a Hindu of humble origin, whose life, darkened by insanity, ended by suicide. The work of these and their fellows is notable for minute finish, but it is stiff, and in colour often crude.

Moghul Painting.

It was in the reign of Jehangir (1605-1628) that Mogul painting reached its highest level, and it is to that period that the Indian painters of to-day and to-morrow must look for the best models for all work of theirs which is not inspired by Hindu philosophy or religion. The Emperor was himself a consummate connoisseur, capable, it is recorded, of discriminating unerringly between the work of the artists of the same school. Sherif Khan, Mansur and Abdul Hassan, the chief artists of his time, were by him highly honoured; the last, in fact, owed his training as well as distinctions and rewards to the Emperor. These and several other painters of the period excelled in portrait-miniatures, of which happily, in consequence of the practice of rolling up paintings like MSS. and only occasionally exhibiting them to view, we have many examples in good condition. These artists are markedly superior to their predecessors' influency and grace of line and show that they benefited by the closer observation of natural facts inculcated from about 1600 onwards. Many of the outline drawings, done with lampblack over a preliminary sketch faintly carried out with a fine brush dipped in Indian red, are of exquisite quality. It is noteworthy that, though in some cases landscape is well rendered as a mere background, there are no examples in Indian painting of the classic age of pure landscape: here the Indian painter of to-day has to develop an ideal with hardly any suggestion from predecessors. The puritanical and bigoted Aurangzeb was naturally hostile to art, and by the middle of the eighteenth century all the glory had departed from Indian painting, though a measure of skill in traditional methods long survived and for a time was not unappreciated by Englishmen in India. By the early years of the nineteenth century, however, Indian painting had virtually ceased to exist. At length a painter arose, to be much admired by the worst judges among those Indians whose Western education had made them indifferent to indigenous art without giving them any real interest in European art. This man, Ravi Varma, depicted Indian legends as if he were painting figures in amateur tableaux; of Indian art traditions there is not a trace in his work, which is theatrical, sentimental and of poor quality technically. There have been others who have more successfully assimilated something of Western ideas of art, but their work is without interest, except in so far as it exhibits a deplorable submissiveness to second-rate Western teaching. The movement of to-day which arouses high expectations is that in which Mr. Abanindranath Tagore is the leader. This artist, member of a Bengali family, noted for culture and cousin of the poet Rabindranath Tagore, has made a close and most profitable study of the work of the Mogul and other painters of India, but he has seen in the examples of their work not something to be slavishly copied but certain principles which he applies freshly, in his own way. He has imagination, a sense of composition, a delicate sense of colour and much, though as yet perhaps not quite secure, command of the technical resources of his art. Above all, he is sincere; nowhere is there in his work any deliberate exploitation of the fact that he is an Eastern artist who must at all costs exhibit Nationalism in his painting. One of his pictures representing the spirits of the air, is justly famous, and his admirable illustrations to Omar Khayyam, issued by the *Studio*, have found appreciation in England as well as in India. Among those more or less associated with this painter, who as Vice-Principal of the Calcutta School of Art, is exercising a strong influence within narrow limits, may be mentioned Mr. Surendranath Ganguly and Mr. Nanda Lall Bose, the latter of whom has a vein of true poetic feeling and both of whom work in intelligent but not abject obedience of the old tradition of Indian painting. If there is no fourth name at present to put besides those mentioned, there is every reason to believe there soon will be several.

Modern Interest.

At the present time there is a marked development of interest among educated Indians in arts indigenous to their country, but it must be recognised that there is little real knowledge and taste in the public to which the Indian artist of to-day has to address himself. Work is esteemed rather as proof of Indian capacity than for its strict artistic merits. Among those Indians and Europeans who have devoted special attention to the matter, there is an unfortunate tendency to exaggerate the value of old Indian art and thus to encourage the belief that the Indian artist of to-day can find no higher task than the repetition of old and narrow conventions. It is perfectly true that we must accept the convention of any art without *a priori* objections, but it by no means follows that one convention is as good as another. The question arises what limits a convention sets on those working within it, and it is plain that the conventions of Indian art have compelled the exclusion of a vast amount of the Western painter's best material. On the other hand, it should be recognised that his traditions have made it almost impossible for the Indian artist to fall into the common Western error of taking a mere representation of fact to be the aim of art. It is most desirable that the Indian artist of to-day should revive the old traditions; that he should be genuinely Indian, but it is not desirable that he should needlessly cramp himself because certain enthusiasts assure him that the defects and limitations of classic Indian art are positive merits. The Indian artist has a vast treasure of religious and philosophical matter to draw upon for such subjects as are most congenial to the Hindu genius, and he has the whole range of Indian life to observe and create over again. There is no occasion for an unwise asceticism on the ground that ancient conventions ruled out most the material.

Manners and Customs.

Next to the complexion of the people, which varies from fair to black, the tourist's attention in India is drawn by their dress and personal decoration. In its simplest form a Hindu's dress consists of a piece of cloth round the loins. Many an ascetic, who regards dress as a luxury, wears nothing more, and he would dispense with even so much if the police allowed him to. The Mahomedan always covers his legs, generally with trousers, sometimes with a piece of cloth tied round the waist and reaching to the ankles. Hill men and women, who at one time wore a few leaves before and behind and were totally innocent of clothing, do not appear to-day within the precincts of civilisation and will not meet the tourist's eye. Children, either absolutely nude or with a piece of metal hanging from the waist in front, may be seen in the streets in the most advanced cities, and in the homes of the rich. The child Krishna, with all the jewels on his person, is nude in his pictures and images.

Dress.—The next stage in the evolution of the Hindu dress brings the loincloth nearly down to the feet. On the Malabar coast, as in Burma, the ends are left loose in front. In the greater part of India, they are tucked up behind—a fashion which is supposed to befit the warrior, or one end is gathered up in folds before and the other tucked up behind. The simplest dress for the trunk is a scarf thrown over the left shoulder, or round both the shoulders like a Roman toga. Under this garment is often worn a coat or a shirt. When an Indian appears in his full indigenous dress, he wears a long robe, reaching at least down to the calves: the sleeves may be wide, or long and sometimes puckered from the wrist to the elbow. Before Europeans introduced buttons, a coat was fastened by ribbons, and the fashion is not obsolete. The Mahomedan prefers to button his coat to the left, the Hindu to the right. A shawl is tied round the waist over the long coat, and serves as a belt, in which one may carry money or a weapon, if allowed. The greatest variety is shown in the head-dress. More than seventy shapes of caps, hats, and turbans, may be seen in the city of Bombay. In the Punjab and the United Provinces, in Bengal, in Burma and in Madras other varieties prevail. Cones and cylinders, domes and truncated pyramids, high and low, with sides at different angles: folded brims, projecting brims: long strips of cloth wound round the head or the cap in all possible ways, ingenuity culminating perhaps in the "parrot's beak" of the Maratha turban—all these fashions have been evolved by different communities and in different places, so that a trained eye can tell from the head-covering whether the wearer is a Hindu, Mahomedan or Parsi, and whether he hails from Poona or Dharwar, Ahmedabad or Bhavnagar.

Fashion Variations.—Fashions often vary with climate and occupation. The Bombay fisherman may wear a short coat and a cap, and may carry a watch in his pocket; yet, as he must work for long hours in water; he would not cover his legs, but suspend only a coloured kerchief from his waist in front. The Pathan of the cold north-west affects loose baggy trousers, a tall head-dress befitting his stature and covers his ears with its folds as if to keep off cold. The poorer people in Bengal and Madras do not cover their heads, except when they work in the sun or must appear respectable. Many well-to-do Indians wear European dress at the present day, or a compromise between the Indian and European costumes, notably the Indian Christians and Parsis. Most Parsis however have retained their own head-dress, and many have not borrowed the European collar and cuffs. The majority of the people do not use shoes: those who can afford them wear sandals, slippers and shoes, and a few cover their feet with stockings and boots after the European fashion in public.

Women's Costumes.—The usual dress of a woman consists of a long piece of cloth tied round the waist, with folds in front, and one end brought over the shoulder or the head. The folds are sometimes drawn in and tucked up behind. In the greater part of India women wear a bodice: on the Malabar coast many do not, but merely throw a piece of cloth over the breast. In some communities petticoats, or drawers, or both are worn. Many Mussalman ladies wear gowns and scarfs over them. The vast majority of Mahomedan women are *gosha*, and their dress and persons are hidden by a veil when they appear in public: a few converts from Hinduism have not borrowed the custom. In Northern India Hindu women have generally adopted the Mussalman practice of seclusion. In the Dekhan and in Southern India they have not.

As a rule the hair is daily oiled, combed, parted in the middle of the head, plaited and rolled into a chignon, by most women. Among high caste Hindu widows sometimes shave their heads in imitation of certain ascetics, or monks and nuns. Hindu men do not, as a rule, completely shave their heads, Mahomedans in most cases do. The former generally remove the hair from a part of the head in front, over the temples, and near the neck, and grow it in the centre, the quantity grown depending upon the fancy of the individual. Nowadays many keep the hair cropped in the European fashion, which is also followed by Parsis and Indian Christians. Most Mussalmans grow beards, most Hindus do not, except in Bengal and elsewhere, where the Mahomedan influence was paramount in the past. Parsis and Christians follow their individual inclinations. Hindu ascetics, known as Sadhus or Bairagis as distinguished from Sanyasis, do not clip their hair, and generally coil the uncombed hair of the head into a crest, in imitation of the god Shiva.

Hindu women wear more ornaments than others of the corresponding grade in society. Ornaments bedeck the head, the ears, the nose, the neck, the arms, wrists, fingers, the waist—until motherhood is attained, and by some even later—and the toes. Children wear anklets. Each community affects its peculiar ornaments, though imitation is not uncommon. Serpents with several heads, and flowers, like the lotus, the rose, and the champaka, are among the most popular object of representation in gold or silver.

Caste Marks.—Caste marks constitute a mode of personal decoration peculiar to Hindus, especially of the higher castes. The simplest mark is a round spot on the forehead It represents prosperity or joy, and is omitted in mourning and on fast-days. It may be red, or yellowish as when it is made with ground sandalwood paste. The worshippers of Vishnu draw a vertical line across the spot, and as Lakshmi is the goddess of prosperity, it is said to represent her. A more elaborate mark on the forehead has the shape of U or V, generally with the central line, sometimes without it, and represents Vishnu's foot. The worshippers of Shiva adopt horizontal lines, made with sandalwood paste or ashes. Some Vaishnavas stamp their temples, near the corners of the eyes, with figures of Vishnu's conch and disc. Other parts of the body are also similarly marked. The material used is a kind of yellowish clay. To smear the arms and the chest with sandalwood paste is a favourite kind of toilet, especially in the hot season. Beads of Tulsi or sacred Basil, and berries of Rudraksha *elæocarpus ganitrus*, strung together are worn round their necks by Vaishnavas and Shaivas, respectively. The Lingayats, a Shaiva sect, suspend from their necks a metallic casket containing the Linga or phallus of their god. Bairagis, ascetics, besides wearing Rudraksha rosaries round their necks and matted hair, smear their bodies with ashes. Religious mendicants suspend from their necks figures of the gods in whose name they beg. Strings of cowries may also be seen round their necks. Muslim dervishes sometimes carry peacock's feathers.

Hindu women mark their foreheads with a red spot or horizontal line. High caste widows are forbidden to exhibit this sign of happiness, as also to deck themselves with flowers or ornaments. Flowers are worn in the chignon. Hindu women smear their faces, arms, and feet sometimes with a paste of turmeric, so that they may shine like gold. The choice of the same colour for different purposes cannot always be explained in the same way. The red liquid with which the evil eye is averted may be a substitute for the blood of the animal slaughtered for the purpose in former times. In many other cases this colour has no such associations. The Muslim dervish affects green, the Sikh Akali is fond of blue, the Sanyasi adopts orange for his robe, and no reason can be assigned with any degree of certainty.

Shiva.—India is a land of temples, mosques and shrines, and the Hindu finds at every turn some supernatural power to be appeased. Shiva has the largest number of worshippers. He has three eyes, one in his forehead, a moon's crescent in his matted hair, and at the top of the coil a woman's face representing the river Ganges. His abode is the Mount Kailas in the Himalayas, from which the river takes its source. Round his neck and about his ears and limbs are serpents, and he also wears a necklace of skulls. In his hands are several weapons, especially a trident, a bow, and a thunderbolt, and also a drum which he sounds while dancing for he is very fond of this exercise. He sits on a tiger's skin, and his vehicle is a white bull. His wife Parvati and his son Ganesha sit on his thighs. An esoteric meaning is attached to every part of his physical personality. The three eyes denote an insight into the past, present and future: the moon; the serpents, and the skulls denote months, years and cycles, for Shiva is a personification of time, the great destroyer. He is also worshipped as a Linga or phallus which represents creative energy.

Ganpat.—Ganesh or Ganpati, the controller of all powers of evil subject to Shiva, is worshipped by all sects throughout India. Every undertaking is begun with a prayer to him. He has the head of an elephant, a large abdomen, serpents about his waist and wrists, several weapons in his hands, and a piece of his tusk in one hand. He is said to have broken it off when he wanted to attack the moon for ridiculing him. The different parts of his body are also esoterically explained. His vehicle is a rat.

Parvati.—Parvati, the female energy of Shiva, is worshipped under various names and forms. She is at the head of all female supernatural powers, many of whom are her own manifestations. Some are benign and beautiful, others terrible and ugly. Kali, the tutelary deity of Kalighat or Calcutta, is one of her fierce manifestations. In this form she is black: a tongue smeared with blood projects from her gaping mouth: besides her weapons, she carries corpses in her hands, and round her neck are skulls. Bombay also takes its name from a goddess, Mumbadevi. Gouri, to whom offerings are made in Indian homes at an annual festival, is benign. On the other hand the epidemic diseases like the plague and small-pox are caused by certain goddesses or "mothers."

Vishnu, the second member of the Hindu trinity, is the most popular deity next to Shiva. He is worshipped through his several incarnations as well as his original personality. His home is the ocean of milk, where he reclines on the coils of a huge, many-headed serpent. At his feet sits Lakshmi, shampooing his legs. From his navel issues a lotus, on which is seated Brahma, the third member of the trinity. In his hands are the conch, which he blows on the battlefield, and the disc, with which the heads of his enemies are severed. Round his neck are garlands of leaves and flowers, and on his breast are shining jewels. As Shiva represents destruction, Vishnu represents protection, and his son is the god of love. To carry on the work of protection, he incarnates himself from time to time, and more temples are dedicated nowadays to his most popular incarnations, Rama and Krishna, than to his original personality. Rama is a human figure, with a bow in one of his hands. He is always accompanied by his wife Sita, often by his brother Lakshmana, and at his feet, or standing before him with joined hands, is Hanuman, the monkey chieftain, who assisted him in his expedition against Ravana, the abductor of his wife. Krishna is also a human figure, generally represented as playing on a flute, with which he charmed the damsels of his city, esoterically explained to mean his devotees.

Brahma is seldom worshipped: only a couple of temples dedicated to him have yet been discovered in all India.

Minor Deities.—The minor gods and goddesses and the deified heroes and heroines who fill the Hindu pantheon, and to whom shrines are erected and worship is offered, constitute a legion. Many of them enjoy a local reputation, are unknown to sacred literature, and are worshipped chiefly by the lower classes. Some of them, though not mentioned in ancient literature, are celebrated in the works of modern saints.

The **Jains** in their temples, adore the sacred personages who founded and developed their sect, and venerate some of the deities common to Hinduism. But their view of Divinity is different from the Hindu conception, and in the opinion of Hindu theologians they are atheists. So also the **Buddhists** of Burma pay almost the same veneration to Prince Siddhartha as if he was a god, and indeed elevate him above the Hindu gods, but from the Hindu standpoint they are also atheists.

Images.—Besides invisible powers and deified persons, the Hindus venerate certain animals, trees and inanimate objects. This veneration must have originated in gratitude, fear, wonder, and belief in spirits as the cause of all good or harm. Some of the animals are vehicles of certain gods and goddesses—the eagle of Vishnu: the swan of Brahma: the peacock of Saraswati: Hanuman, the monkey, of Rama: one serpent upholds the earth, another makes Vishnu's bed: elephants support the ends of the universe, besides one such animal being Indra's vehicle: the goddess Durga or Kali rides on a tiger: one of Vishnu's incarnations was partly man and partly lion. The cow is a useful animal: to the Brahman vegetarian her milk is indispensable, and he treats her as his mother. So did the Rishi of old, who often subsisted on milk and fruits and roots. To the agriculturist cattle are indispensable. The snake excites fear. Stones, on which the image of a serpent is carved, may be seen under many trees by the roadside. The principal trees and plants worshipped are the Sacred Fig or Pipal, the Banyan, the Sacred Basil, the Bilva or Wood Apple, the Asoka, and the Acacia. They are in one way or another associated with some deity. The sun, the moon, and certain planets are among the heavenly bodies venerated. The ocean and certain great rivers are held sacred. Certain mountains, perhaps because they are the abodes of gods and Rishis, are holy. Pebbles from the Gandaki and the Narmada, which have curious lines upon them, are worshipped in many households and temples.

Worship.—Without going into a temple, one can get a fair idea of image worship by seeing how a serpent-stone is treated under a tree. It is washed, smeared with sandal, decorated with flowers: food in a vessel is placed before it, lamps are waved, and the worshipper goes round it, and bows down his head, or prostrates himself before the image. In a temple larger bells are used than the small ones that are brought to such a place: jewels are placed on the idol: and the offerings are on a larger scale. Idols are carried in public procession in palanquins or cars. The lower classes sacrifice animals before their gods and goddesses.

Domestic Life.—Of the daily domestic life of the people a tourist cannot see much. He may see a marriage or funeral procession. In the former he may notice how a bridegroom or bride is decorated: the latter may shock him, for a Hindu dead body is generally carried on a few pieces of bamboo lashed together: a thin cloth is thrown over it and the body is tied to the frame. The Mahomedan bier is more decent, and resembles the Christian coffin. Some Hindus, however, carry the dead to the burial ground in a palanquin with great pomp. The higher castes cremate the dead: others bury them. Burial is also the custom of the Muslims, and the Parsis expose the dead in Towers of Silence.

Indian Names.

The personal name of most Hindus denotes a material object, colour, or quality, an animal, a relationship, or a deity. The uneducated man, who cannot correctly pronounce long Sanskrit words, is content to call his child, father, brother, uncle, or mother, or sister, as the case may be. This practice survives among the higher classes as well. Appa Saheb, Anna Rao, Babaji, Bapu Lal, Bhai Shankar, Tatacharya, Jijibhai, are names of this description, with honorific titles added. It is possible that in early society the belief in the re-birth of departed kinsmen lent popularity to this practice. Nothing could be more natural than to call a man white, black, or red: gold or silver: gem, diamond, ruby, pearl, or merely a stone: small or tall, weak or strong: a lion, a snake, a parrot, or a dog: and to name a woman after a flower or a creeper. Thus, to take a few names from the epics, Pandu means white, and so does Arjuna: Krishna black; Bhima terrible: Nakula a mongoose: Shunaka a dog: Shuka a parrot: Shringa a horn. Among the names prevalent at the present day Hira is a diamond: Ratna or Ratan a jewel: Sonu or Chinna gold: Velli or Belli, in the Dravidian languages, means white metal or silver. Men are often called after the days of the week on which they were born, and hence they bear the names of the seven heavenly bodies concerned. When they begin to assume the names of the Hindu deities, they practically enter upon a new stage of civilisation. It is doubtful whether the Animists ever venture to assume the names of the dreaded spirits worshipped by them. To pronounce the name of a devil is to invite him to do harm. If the spirits sometimes bear the names of human beings, the reason seems to be that they were originally human.

High-caste practices.—The high caste Hindu, on the other hand, believes that the more often the name of a deity is on his lips, the more merit he earns. Therefore he deliberately names his children after his gods and goddesses, so that he may have the opportunity of pronouncing the holy names as frequently as possible. These are also sonorous and picturesque. Shiva is happy: Vishnu is a pervader: Govinda is the cowherd Krishna: Keshava has fine hair: Rama is a delighter: Lakshmana is lucky: Narayana produced the first living being on the primeval waters: Ganesha is the Lord of Shiva's hosts: Dinakara is the luminary that makes the day: Subrahmanya is a brother of Ganesha. Sita is a furrow: Saitri a ray of light: Tara a star: Radha prosperity: Rukmini is she of golden ornaments: Bhama of the glowing heart. Shiva and Vishnu has each got at least a thousand names, and they may be freely drawn upon and paraphrased in naming one's children; and the whole Hindu pantheon is as crowded as it is large. When a mother loses several children, she begins to suspect that some evil spirit has conspired against her and in order to make her off-spring unattractive to the powers of darkness, she gives them ugly names, such as Keru, rubbish, or Ukirda, dunghill, or Martoba, the mortal. Women are named after rivers, as Sarasvati, Ganga, Bhagirathi, Godavari, or Kaveri, just as men are sometimes called after mountains. Manu counsels young men not to choose a wife with such a name, perhaps because a river is an emblem of deviousness and inconstancy, as a hill is an emblem of stability. But the names of rivers have not been discarded. The Burmans have a curious custom; if a child is born on a Monday, its name must begin with a guttural, on Tuesday with a palatal, on Thursday with a labial, on Saturday with a dental.

Family names.—When a person rises in importance, he adds to his personal name a family or caste name. It was once the rule that the title Sharma might be added to a Brahman's name, Varma to a Kshatriya's, Gupta to a Vaishyas, and Dasa to a Shudra's. This rule is fairly well observed in the case of the first two titles, but the meaning of the other two has changed. Dasa means a slave or servant, and the proudest Brahman cannot disdain to call himself the servant of some god. Thus, although Kalidas, the famous poet, was a Shudra, Ramadas, the famous guru of Shivaji, was a Brahmin. The Vaishnavas have made this fashion of calling oneself a servant of some god exceedingly popular, and in Western India high caste Hindus of this sect very commonly add Das to their names. The Brahmans of Southern India add Aiyer or Aiyangar to their names. Shastri, Acharya, Bhat, Bhattacharya, Upadhyaya, Mukhopadhyaya, changed in Bengal into Mukerji, are among the titles indicative of the Brahmanical profession of studying and teaching the sacred books. Among warlike classes, like the Rajputs and Sikhs, the title Singh (lion) has become more popular than the ancient Varma. The Sindhi Mal, as in Gidumal, means brave and has the same force. Raja, changed into Raya, Rao and Rai was a political title, and is not confined to any caste. The Bengali family names, like Bose and Ghose, Dutt and Mitra, Sen and Guha, enable one to identify the caste of their bearers, because the caste of a family or clan cannot be changed. Shet, chief of a guild or a town, becomes Chetty, a Vaishya title, in Southern India. Mudaliyar and Nayudu, meaning leaders, are titles which were assumed by castes of political importance under native rulers. Nayar and Menon are the titles of important castes in Malabar. Ram, Lal, Nand, Chand, are among the additions made to personal names in Northern India. Suffixes like Ji, as in Ramji or Jamshedji, the Kanarese Appa, the Telugu Garu, the feminine Bai or Devi, are honorific. Prefixes like Babu, Baba, Lala, Sodhi, Pandit, Raja, and the Burmese Maung are also honorific.

Professional names.—Family names sometimes denote a profession: in some cases they might have been conferred by the old rulers, Mehta, Kulkarni, Deshpande, Chitnavis, Mahalnavis are the names of offices held in former times. One family name may mean a flour seller, another a cane-seller, and a third a liquor-seller. To insert the father's name between one's personal and the family name is a common practice in Western India. It is rare elsewhere. When a family comes from a certain place, the suffix 'kar' or 'wallah' is added to the name of the place and it makes a family surname in Western India. Thus we may have Chiplunkars and Suratwallahs, or without these affixes we may have Bhavnagris, Malabaris and Billimorias, as among Parsis. Thus Vasudev Pandurang Chiplunkar would be a Hindu, whose personal name is Vasudev, father's name Pandurang, and family name derived from the village of Chiplun, is Chiplunkar. In Southern India the village name precedes the personal name. The evolution of Musalman names follows the same lines as Hindu names. But Muslims have no god or goddesses, and their names are derived from their religious and secular history. These names and titles are often as long and picturesque as Hindu appellations. The agnomens Baksh, Din, Ghulam, Khwaje, Fakir, Kazi, Munshi, Sheikh, Syed, Begum, Bibi and others, as well as honorific additions like Khan, have meanings which throw light of Muslim customs and institutions. The Parsis also have no gods and goddesses, and their personal names are generally borrowed from their sacred and secular history. Their surnames frequently indicate a profession or a place, as in the case of Hindus in Western India. Batliwallah, Readymoney, Contractor, Saklatwallah, Adenwallah and others like them are tell-tale names.

Conversions.—As a rule, a child is named soon after it is born, and in the case of males the appellation is not changed. The higher Hindu castes have a separate ceremony called the name-giving ceremony performed on the twelfth day after birth. When a girl is married in these castes, the husband's family give her a new personal name. When a boy is invested with the sacred thread and is made a twice-born, his name is not changed, but when a man joins an order of ascetics, his lay name is dropped, and he assumes a new name. So also when a Burman joins an order of monks or nuns, the lay name is superseded by a Pali name. Christian converts change their original name when they are baptised.

Routes between India and Europe.

The War has completely altered the sailing programmes of all Steamship lines maintaining services between India and Europe, and the particulars on the following pages are merely given has a rough guide. At the time of going to press the P. & O. S. N. Company (with which is combined the B. I. S. N. Co.) are only able to announce a fortnightly service, and even those sailings are irregular. Passengers are only being booked to London by sea, the Marseilles and Brindisi routes being closed.

The Indian port for the direct journey to and from Europe is Bombay. There are ordinarily six lines of steamers by which the journey to and from the West *via* Bombay can be performed, either by sea all the way, or—and in some cases only—by sea part of the way and by rail across Europe. They are the P. & O., the Anchor Line, the City and Hall Line, and the Marittima Italiana (Italian Mail S. N. Co.). the British India line also, in pre-War days, had an occasional service to London. The Natal line steamers were available for Western passages only, the steamers sailing round the Cape on their Eastward voyages. There are ordinarily other services between Calcutta and the West, by steamers sailing round Ceylon, and several lines connect Colombo with Europe. Of the latter the Orient,† the Messageries Maritimes (which also sailed from Bombay at fortnightly intervals before the War) and the Bibby Lines are the chief, besides the P. & O. The Bibby service extends to Rangoon. The new railway between India and Ceylon greatly increases the importance of the Colombo route for Southern India. The shortest time between London and Bombay is 14 days.

The following are the latest peace time details:—

The P. & O.

The P. & O. steamers run weekly from Bombay and London, leaving Bombay on Sunday and London on Saturday. Alternate sailings each way are direct. In other weeks a special steamer runs from Bombay to Aden where it connects with the Australian Homeward Mail and similarly, for the outward voyage, passengers and baggage and mails are transferred on alternate weeks to a steamer at Aden which proceeds thence direct to Bombay. The P. & O. carry the postal mails. The steamers call at Aden, Port Said, Marseilles, and Gibraltar. Passengers are not usually allowed to land at Aden but there is ordinarily time for them to spend some hours ashore at Port Said and Marseilles and a shorter time at Gibraltar. Passengers may travel westward from Port Said by any of the following methods:—

By the liner to Marseilles; thence by special P. & O. express to Boulogne and so by Falkestone to London; or

By Liner to Tilbury Dock.

The arrangements for the eastward voyage are similar, in reverse order.

The following are the Ticket rates from Bombay to Europe by P. & O. Line:—

From Bombay (or Karachi).	Single Ticket.					Return Ticket (valid 2 years).				
	1st Saloon.			2nd Saloon.		1st Saloon.			2nd Saloon.	
	"A"	"B"	"C"	"A"	"B"	"A"	"B"	"C"	"A"	"B"
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
To London by sea	900	810	720	660	570	1,350	1,215	1,080	990	855
To Marseilles, Malta, or Gibraltar.	840	750	660	630	540	1,260	1,125	990	945	810
To London *via* Marseilles, with ordinary rail ticket ..	942	852	762	700	610	1,464	1,329	1,194	1,085	950
To Marseilles and returning from London by sea ..	..	..	..	..	..	1,305	1,170	1,035	967-8	832-8
To London *via* Marseilles, and including Special Express (rail and sleeping car ticket).	998	908	818	788	698	1,596	1,441	1,306	1,261	1,126

Free tickets are issued to Karachi passengers by B. I. S. N. Co.'s steamers between Bombay and Karachi for either eastward or westward voyage. The transfer from the B. I. steamer to the P. & O. steamer, or *vice versa*, is made in Bombay harbour by launch, without going ashore.

The first saloon inside cabins on the Main deck of the Mail Steamers are let at a reduced rate.

First Saloon passengers are allowed 3 cwts. of personal Baggage free of Freight; Second Saloon passengers and servants 1½ cwt. each; Children over three and under 12 years of age half these weights; Ayahs and other native servants 1½ cwt. each free.

† The Orient Line after the outbreak of the War began running their steamers *via* the Cape omitting the call at Colombo both Homeward and Outward.

† Anchor Line.

The Anchor Line steamers run between Bombay and Liverpool and there are ordinarily wo steamers each way per month. Westward-bound steamers call at Marseilles, so that passengers can leave the ship there if they wish. After the War calls will be made at Marseilles on the Outward and Homeward journeys. Other calls are at Port Said and Gibraltar. Eastward bound steamers do not call at Marseilles. Free tickets by B. I. S. N. Co.'s steamers are issued to Karachi passengers to and from Bombay. The passage rates Westward from Bombay are as follows:—

From Bombay (or Karachi).	Single Ticket.		Return Ticket (valid 2 years).	
	Saloon.	Native Servant.	Saloon.	Native Servant.
	Rs.	Rs.	Rs.	Rs.
To Marseilles	555	248	....	....
„ Liverpool	600	263	900	395
„ London overland from Marseilles (1st class rail) and returning from Liverpool	630	298 (3rd rail)	942	434 (3rd rail)
„ New York *via* Liverpool and Glasgow .	867	....	1,433	....

Some sailings are made homeward *via* Genoa, fares by this route being, Single fare to Genoa Rs. 525 and to Glasgow Rs. 600. Passengers are allowed to take free of charge, 40 cubic feet of baggage, excess being charged at the rate of a shilling per cubic foot. Dogs are carried and the charge for them is Rs. 50 per animal—arrangements must be made with the ship's butcher as to feeding.

The voyage Bombay to Liverpool occupies approximately 30 days. Bombay Agents, W. & A. Graham & Co.

† Ellerman's "City" & "Hall" Lines.

The City and Hall Liners sail westward for the most part from Karachi, *via* Bombay. Some ships go direct from one port and others direct from the other. They sail to Liverpool and passengers can be booked *via* Marseilles and Overland either Eastward or Westward. Most of the steamers have both first and second class accommodation. Others have one class only. Passengers booking their berths in Karachi for steamers sailing from Bombay are given free tickets from Karachi to Bombay by a British India S. N. Co.'s steamer. They are transferred immediately on arrival in Bombay to the Ellerman liner if she is sailing the same day; otherwise they are landed and at the same time informed as to when the steamer for Europe sails.

Adult 1st class passengers are allowed 3 cwt. of luggage free, subject to a limit in measurement of 40 feet. Children and European servants travelling first class are allowed half that quantity. Children and native servants travelling 2nd class are allowed 60 lbs. Bicycles in crates or cases are specially charged for.

Fares from Karachi or Bombay:—

From Bombay or Karachi.	Single Ticket.			Return Ticket (valid 2 years).		
	1st Saloon.	2nd Saloon.	Native Servant.	1st Saloon.	2nd Saloon.	Native Servant.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
To Marseilles	555	420	248	833	630	375
„ Liverpool	600	450	26	900	675	395
„ London *via* Marseilles (with rail) ..	630	480	29	1,033	790	434
„ Marseilles, returning from Liverpool .	..	..	..	867	653	385

† At time of going to press these steamers are sailing *via* the Cape.

Rubattino.

Monthly sailings from Bombay for Catania, Messina, Naples, Leghorn and Genoa, Messina ordinarily being reached on the 14th day, Naples on the 15th and Genoa on the 17th. The usual baggage allowances are made and baggage is conveyed free by sea from Port Said to London.

FARES FROM BOMBAY.	Single.			Return (valid 2 years).		
	First* Saloon.	Second Saloon.	Indian Servant.	First* Saloon.	Second Saloon.	Indian Servants.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
To Catania, Messina, Naples, Leghorn and Genoa	450	350	180	675	525	277-8
Do. (Protestant Missionary rate) .	427-8	325	..	..	..	..
Do. (European Hospital Nurse)...	400	..	..	600	..	..
To London *via* Genoa, Turin, Paris, Calais and Dover	560-8	427	..	896	678	..
To London *via* Genoa, Turin, Paris, Dieppe and Newhaven	546	417	..	867	659	..

*Rs. 50 is charged for berth in a single berth cabin; Rs. 75 on a return ticket.
The Messageries Maritimes and Marittimi Italiana have a joint arrangement by which passengers taking return tickets may travel one way by one line and back by the other.

Natal Line.

The steamers make their eastward voyages round South Africa. Westward sailings from Bombay to Weymouth usually once a month during the season.

Fares, Bombay to Weymouth (25 days):—First class, Rs. 375 to Rs. 420, according to class of steamer and position of berth. Cheap first class tickets are issued for berths in 2, 3, and 4 berth cabins.

Bibby Line.

Two (in the season, sometimes three) sailings monthly from Rangoon, *via* Colombo and Marseilles, to Liverpool. Fares from Rangoon and Colombo:—

	Single.		Return.		
	1st Class.		1st Class, available for 4 months from Rangoon.	1st Class, available for 2 years.	
	From Rangoon.	From Colombo		From Rangoon	From Colombo.
	Rs.	Rs.	Rs.	Rs.	Rs.
To Marseilles	625	600	900	1,050	825
To London by sea returning from Liverpool ..	675	630	1,000	1,100	875
To London by sea returning from London *via* Marseilles.	..	..	1,200	1,075	1,000
To London *via* Marseilles	700	675	1,100	1,250	1,050
To Marseilles returning from Liverpool by sea.	..	..	1,000	1,125	925
To London by sea returning from Marseilles ..	..	..	1,000	1,125	925

Free 1st class tickets; Talaimannar—Colombo are given to passengers from South India.

Orient Line. †

Fortnightly sailings (Australian Mail) on Thursdays from Colombo to Port Said, Naples Marseilles, Plymouth and London. Fares from Colombo :—

From Colombo to	1st Saloon.		2nd Saloon.		Native Servants.	
	Single.	Return 2 years.	Single.	Return 2 years.	Single.	Return 2 years.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Suez and Port Said	600	900	510	765	210	315
	660	990				
	780	1,170	600	900		
Naples, Marseilles and Gibraltar ..	660	990	540	810	210	315
	720	1,080				
	840	1,260	630	945		
Plymouth and London	690	1,035	570	855	240	360
	750	1,125				
	900	1,350	660	990		

Concessions for tickets, Talaimannar—Colombo, are given to South India passengers. Tickets are issued for native servants.

† The Orient Line at present are running their steamers *via* the Cape and are omitting the call at Colombo both Homeward and Outward.

It used to be possible to obtain cheap passages, eastward or westward, in cargo ("tramp") steamers. These are now next to impossible to secure, because as the steamers are not licensed to carry passengers, passengers have to sign on as members of the crew, and the recent extension of the Employers' Liability Act then involves the ship's owners in liability to compensation to them for a variety of causes.

Indian Train Service.

The distances and railway fares from Bombay to the principal centres of other parts of India are as follows, the trains now running somewhat more slowly (for economy's sake) than in normal times :—

	Miles.	1st Class.	2nd Class.
		Rs. a.	Rs. a.
Delhi, B.B. & C.I. Railway, *via* new Nagda-Muttra direct route	865 (27½ hours)	81 2	40 9
Delhi, G. I. P. Railway, *via* Agra	957 (30½ hours)	81 2	40 9
Simla, *via* Delhi	1,137	118 3	60 1
Calcutta, G.I.P. from Bombay, *via* Jubbulpore & Allahabad..	1,349	113 3½	56 10½
Calcutta, G. I. P. from Bombay, *via* Nagpur	1,223	105 3½	52 10½
Madras, G. I. P. from Bombay, *via* Raichur	794	74 8	37 3
Lahore, *via* Delhi	1,162	109 0	54 8

THE SUEZ CANAL.

The annual report of the **Suez Canal Company** published in May, 1916, states that the total receipts for 1915 amounted to 98,228,093f. (£3,929,123), a decrease of 26,893,138f. (£1,075,725) as compared with 1914. The excess of revenue over expenditure, including the amount brought forward, was 73,021,375f. (£2,920,855), as against 80,359,898f. (£3,214,395). It was proposed to distribute 61,567,887f. (£2,462,715), and to carry forward the balance of 11,453,488f. (£458,139), which compares with 18,703,500f. (£748,140) brought in. The distribution had the effect of bringing the dividend on each share to 109f. 28c., which, with interest of 25f., represents a gross return of 134f. 28c., and a net return of 120f. (£4 16s.).

The **dues** which the Canal Company was authorised to charge by its concession of 1856 were 10 francs a ton, charged on the gross register tonnage. To these objections were soon raised and as the result of an international Conference at Constantinople in 1873 the dues were fixed at 10 francs per net register ton with a surtax of 4 francs—afterwards reduced to 3. British shipowners still found the dues excessive and a meeting of their representatives and those of the Canal Company in 1883 agreed that in 1885 the dues should be reduced to 9½ francs a ton, that subsequently they should be lowered on a sliding scale as the canal dividend increased, and that after the dividend reached 25 per cent. all the surplus profits

should be applied in reducing the rates until they were lowered to 5 francs a ton. Under this arrangement dues were fixed at 7¼ francs per ton at the beginning of 1906, and at the outbreak of war were as low as 6½ francs a ton, where they remained until October, 1916, when they were raised by ½ franc a ton.

Traffic in War Time.—The number of vessels which passed through the canal during the year 1916 was 3,110, of which 2,388 carried the British flag, against a total of 3,708 in the previous year, the net tonnage for the year showing a decrease of 2,940,808 as compared with that of the preceding year. The tonnage of German vessels decreased from 3,352,287 in 1913 to 2,118,946 in 1914, and disappeared entirely in 1915 and 1916.

Troops carried through the canal numbered 235,441, as compared with 119,812 in 1915, and the number of civilian passengers amounted to 45,743, a decrease of over 40,000 compared with the preceding year.

For the half-year ended June 1917 the total traffic was 4,257,000 tons, as compared with 10, 344,675 in the corresponding period of 1914, net diminution of tonnage for this period as compared with the previous corresponding half-year amounted to 2,000,924, the reduction in commercial shipping being 2,121,081 tons, against an increase of 120,877 tons in ships used by the Italian, Greek, and Japanese Governments for military purposes.

Improvement Schemes.—It was announced in 1914 that from and after January 1st, 1915, **the maximum draught of water** allowed to ships going through the **Suez Canal** would be increased by 1ft., making it 30ft. English.

The maximum permissible draught of ships using the Canal was 24·4 feet in 1870; in 1890 ships drawing 25·4 feet could make the passage; and during the following 24 years the increase has been at the average rate of about 1 foot every six years, thus bringing the maximum draught authorized to 29 feet.

The scheme of improvement adopted by the Company on the recommendation of the International Consultative Committee of Works, the British representatives on which are Sir William Matthews and Mr. Anthony Lister, is a comprehensive one, and the details suggest that it will meet the needs of the big ship.

A 40 feet Channel.—The declared policy of the Canal Company in regard to the deepening of the Canal is to offer a slightly greater depth of water than that available in ports east of Suez. It is claimed that, with the exception of Sydney, there is no eastern port which at low tide has a greater depth of water than that now provided in the Canal throughout the full length of nearly 105 miles. In any case the work in hand should meet the needs of any ship likely to be built for the eastern trade during the next few years.

When the Canal was opened in 1869, the width was 72 feet and the depth about 26 feet 2 inches. In June, 1913, the width at a depth of 32 feet 8 inches had been increased to a minimum of 147 feet 6 inches over a length of about 85 miles, and to a width of 328 feet over a distance of about 20 miles. The latest scheme makes provision for a depth of 40 feet throughout and for a widening up to 196 feet 8 inches in the south section, and the cutting of an appropriate number of sidings in the north and central sections, where a minimum width of 147 feet 6 inches is believed to be sufficient for the requirements of the immediate future.

The work of enlarging the capacity of the Canal presents no special difficulty on the engineering side. A good deal of sand is occasionally driven into the channel at Port Said during storms, but a remedy for this will be found in extension of the west breakwater by about 2,700 yards at a cost of over £6,000,000. The construction of this extension, which has been in hand for the past two years, is making satisfactory progress. The Suez Roads are being adequately dredged in accordance with an agreement between the Egyptian Government and the Company.

Almost up to the end of 1915 the works for extending the jetty to the west of Port Said, works of capital importance for the **protection of the entry** to the Canal, were pushed on uninterruptedly. In November, however, for want of hydraulic lime, the manufacture of artificial rocks for this jetty was interrupted. The submarine foundations in stone and rubble of the new jetty were, as a matter of fact, completed to a length of 2,500 metres; the protective blocks were laid for 1,040 metres, and cemented for over 800 metres. The protection of the Channel is thus secured, and there is no need for any apprehension as to its future.

The Canal in war time.—On October 22, 1914, the British Government issued a notification in the following terms to the representatives of foreign maritime Powers in London, and asked them to communicate it to their Governments:

"Since the outbreak of war certain ships of enemy countries have remained in the Suez Canal.

"Some of these vessels were detained by the Egyptian Government on account of hostile acts committed in the Canal; some because there was reason to apprehend that they contemplated hostile acts; others, though perfectly free, have refused to leave the Canal in spite of the offer of a free pass, thus disclosing their intention to use the ports of the Canal merely as ports of refuge, a measure which is not contemplated by the Suez Canal Convention.

"His Majesty's Government do not admit that the Conventional right of free access and use of the Canal enjoyed by merchant vessels implies any right to make use of the Canal and its ports of access for an indefinite time to escape capture, since the obvious result of permitting any such course must be greatly to incommode and even to block the use of the ports and Canal by other ships, and they are consequently of opinion that the Egyptian Government are fully justified in the steps which they are taking to remove from the Canal all enemy ships which have been long enough in the Canal ports to show clearly that they have no intention of departing in the ordinary way, and that they are putting the Canal and its ports to a use which is inconsistent with the use of the Canal in the ordinary way by other shipping."

Travel in India.

Twenty years ago, a tour in India was possible only to the wealthy, the leisured and those who had friends in the country. The cost of the journey was very high, the methods of transportation were very slow; and the facilities for travel were so indifferent that it was a bold man who consigned himself to the mercies of the country without a sheaf of letters of introduction. Now the mail which in peace time is posted in London on Friday night, reaches Bombay in thirteen and a half-days, and the passenger can travel by the same route and with the same speed as the mail. A dozen lines have covered the sea route between Europe and India and Ceylon with a plexus of regular services. The Indian Railways provide facilities on the trunk lines unsurpassed by the *trains-de-luxe* of Europe, and the Indian hotel has grown into a really comfortable caravanserai.

In the touring season, which extends from November to March, there is the attraction of a perfect climate. It is never very hot; in the North indeed it is really cool, it is always fine and fresh and bracing. If there is one country in the world to which that elusive term applies, here we have at the season when the tourist arrives the real "Indian summer." Then there is its infinite variety. India is in no sense a nation and never will be. Its peoples are wide as the Poles asunder, each has its own art, its own architecture, its own customs and its own civilisation. A certain superficial resemblance runs through each; beneath lies a never-ending variety which age cannot wither nor custom stale.

The Grand Tour.—People coming to India for the first time so often ask:—"Where shall I go?" Well, wherever else the tourist may go, whatever else he should leave out, he should omit nothing on the Grand Tour. It is the foolish custom nowadays to sneer at those who follow the beaten tracks, but the visitor who shuns any part of the orthodox journey across India misses what nothing else can repay. **Bombay** is by far the most convenient point of departure, for here "the world end steamers wait," here is one of the finest cities in the British Empire, and here the traveller can best complete his outfit and arrangements. From Bombay stretch northwards the two great trunk lines of India. One, the **Bombay Baroda & Central India Railway**, leads through the pleasant garden of Gujarat to Ahmedabad, the ancient Moslem capital of the Province, containing fine examples of Mahomedans and Jain architecture; thence to Abu for the famous Jain temples of Dilwara, and on to Ajmere, Jaipur and Agra. The other by the **Great Indian Peninsula Railway** carries the tourist over the Western Ghats by a superb mountain railway to Gwalior, whose rock fortress rises like a giant battleship from the plain, and so on to Agra. Of the glories of the Taj Mahal, Agra Fort, and the deserted city of Fatehpur Sikri it were supererogatory to speak. Another easy stage leads to **Delhi** that amazing collection of cities, dominated by the little Ridge where British valour kept the mutinous hordes at bay, and finally drove them from the city by a feat of arms unsurpassed in history. Then from Delhi the East Indian line leads comfortably to Benares, Lucknow and Calcutta, with the opportunity of an excursion to Cawnpore, if the spirit moves. The great charm of the Grand Tour is that it reveals the best that India can show. This route has the additional advantage that it fits in with any digressions which the time and purse of the traveller may permit. No one who can spare the time should fail to push northwards from Delhi to Peshawar, where the flower of the army keeps watch and ward over the Khyber, and up the dread Pass to the eyrie where the fort of Ali Masjid bars the way to all invaders. **Calcutta** is the best starting point for Darjeeling, though unfortunately the magnificent mountain panorama visible from there is often obscured at this season by mists. Then from Calcutta two alternatives open. A fine service of mail steamers leads to **Burma**, and one of the unforgettable memories of the East is a voyage down the Irrawaddy from Bhamo or Mandalay to Prome. Again, either direct from Calcutta, or *via* Burma, is an easy route to **Madras** and by way of Madura and Trichinopoly, with their peerless Hindu temples, back to Bombay, or on through Tuticorin to **Colombo**. But indeed the possibilities of expanding this tour are endless. Bombay is the best centre for the rock temples of Elephanta, Kenheri, Karli, Ellora and Ajanta. Calcutta is only a short distance from Puri the one Indian temple where there is no caste, and perhaps the most remarkable Hindu temple in the country. From Calcutta also start the river steamers which thread the steamy plains of Bengal and run to the tea gardens of Assam.

SPECIMEN TOURS.

A number of specimen tours in India are given below. They are taken from one of Messrs. Thos. Cook & Son's publications, from which firm further information may be obtained. The

traveller will also find he can obtain assistance from the principal Shipping Agents and Railway Companies, or from Messrs. Cox & Co., Messrs. Grindlay & Co., and Messrs King, King & Co.

	1st Class.	2nd Class Rail, 1st Class Steamer.
	Rs. a.	Rs. a.
FROM BOMBAY TO CALCUTTA.		
Via the North-West Provinces to Calcutta (including side trip from Calcutta to Darjeeling).		
TOUR I.—From Bombay per B. B. & C. I. Railway *via* Ahmedabad, Abu Road (for Mount Abu), Ajmer, Jaipur, Delhi, Agra, Cawnpore, Lucknow and Benares to Calcutta, thence to Darjeeling, and back to Calcutta	266 4	133 3
TOUR II.—From Bombay per G. I. P. Railway *via* Itarsi, Gwalior, Agra, Delhi, Tundla Junction, Cawnpore, Lucknow and Benares to Calcutta, thence to Darjeeling, and back to Calcutta	266 13	138 7
FROM BOMBAY TO COLOMBO.		
Via the North-West Provinces, Calcutta and Southern India to Colombo (including side trip from Calcutta to Darjeeling).		
TOUR III.—From Bombay as in Tour No. I (*via* B. B. & C. I. Ry., Jaipur and the North-West Provinces) to Calcutta side trip to Darjeeling and back to Calcutta, thence *via* Khurda Road, for Puri (Juggannath), Madras, Tanjore, Trichinopoly, Madura, Danushkodi and Talaimannar to Colombo	423 8	212 13
TOUR IV.—From Bombay as in Tour No. II (*via* G. I. P. Ry., Itarsi, Agra and the North-West Provinces) to Calcutta, side trip to Darjeeling and back to Calcutta, thence as in Tour No. III to Colombo (*via* Southern India)	424 1	213 1
Via the North-West Provinces, Calcutta (including Darjeeling), Burma and Southern India.		
TOUR V.—From Bombay as in Tour No. I (*via* B. B. & C. I. Ry., Jaipur and the North-West Provinces) to Calcutta, side trip to Darjeeling and back to Calcutta, thence British India Steamer to Rangoon, Rail to Mandalay. Irrawaddy Steamer to Prome, Rail to Rangoon; British India Steamer to Madras, Rail *via* Tanjore, Trichinopoly, Madura to Danushkodi; Steamer to Talaimannar and Rail to Colombo ..	586 13	399 12
TOUR VI.—From Bombay as in Tour No. II (*via* G. I. P. Ry., Itarsi, Agra and the North-West Provinces) to Calcutta, thence as in Tour No. V to Colombo	587 6	400 0
FROM BOMBAY TO RANGOON.		
Via the North-West Provinces and Calcutta to Rangoon (including a tour in Burma, also including a side trip from Calcutta to Darjeeling).		
TOUR VII.—From Bombay as in Tour No. I (*via* B. B. & C. I. Ry., Jaipur and the North-West Provinces) to Calcutta side trip to Darjeeling and back to Calcutta, thence British India Steamer to Rangoon, Rail to Mandalay, Irrawaddy Steamer to Prome, Rail to Rangoon	447 9	288 14
TOUR VIII.—From Bombay as in Tour II (*via* G. I. P. Ry., Itarsi, Agra and the North-West Provinces) to Calcutta, side trip to Darjeeling and back to Calcutta, thence British India Steamer to Rangoon. Rail to Mandalay, Irrawaddy, Steamer to Prome, Rail to Rangoon	448 2	289 2

—	1st Class.	2nd Class Rail, 1st Class Steamer.
FROM CALCUTTA TO BOMBAY. *Via the North-West Provinces.*	Rs. a.	Rs. a.
TOUR IX.—From Calcutta *via* Benares, Lucknow, Cawnpore, Tundla, Agra, Delhi, Rewari, Jaipur, Ajmer (for Udaipur), Abu Road (for Mt. Abu), Ahmedabad and Baroda to Bombay	165 5	82 11
TOUR X.—From Calcutta *via* Benares, Moghal Serai, Cawnpore, Tundla, Agra, Delhi, Rewari, Jaipur Ajmer (for Udaipur), Abu Road (for Mt. Abu) Ahmedabad and Baroda to Bombay	167 7	83 13
TOUR XI.—From Calcutta *via* Benares, Moghal Serai, Cawnpore, Tundla, Agra, Gwalior and Itarsi to Bombay..	149 1	74 9
TOUR XII.—From Calcutta *via* Benares, Moghal Serai, Cawnpore, Delhi, Muttra, Agra, Gwalior and Itarsi to Bombay	167 14	83 15
CIRCULAR TOUR FROM CALCUTTA.		
TOUR XIII.—From Calcutta *via* Benares, Lucknow, Cawnpore, Tundla, Agra, Bandikui, Jaipur, Delhi, and Allahabad to Calcutta	191 1	95 9
Extensions, Via Southern India to Colombo.		
TOUR XIV.—From Bombay *via* Poona, Hyderabad, Wadi, Raichur, Madras, Tanjore, Trichinopoly, Madura, Danushkodi, and Talaimannar to Colombo	154 6	77 13
TOUR XV.—From Bombay *via* Poona, Hyderabad, Wadi, Guntakal, Bangalore, Erode, Trichinopoly, Madura, Danushkodi, and Talaimannar to Colombo	148 5	74 12
Extensions to above Tours.		
From Ajmer to Udaipur and return	34 12	17 6
From Abu Road to Mount Abu and return, one seat in Tonga (This excursion is strongly recommended, the scenery being very beautiful) ..	7 0	....
From Delhi to Lahore and return *via* Umballa and Amritsar	58 2	29 2
From Delhi *via* Bhatinda, Ferozepore to Lahore, returning *via* Amritsar Umballa to Delhi	56 15	28 8
From Calcutta to Darjeeling and return	101 0	50 8
From Colombo to Kandy and return	9 0	6 0
From Kurda Road to Puri (Jagganath and return)	5 4	2 10

(All fares subject to change without previous notice.)

LIST OF HOTELS IN INDIA.

The following list of hotels is largely based on information kindly supplied by Messrs. Thos. Cook & Son, Bombay :—

AGRA.—Cecil, Laurie's Great Northern, Metropole, Carlton.
AHMEDABAD.—Grand, Empire.
ALLAHABAD.—Central, Grand.

BANGALORE.—West End, Cubbon.
BENARES.—Clark's, Hotel de Paris.

BOMBAY.—Taj Mahal, Majestic, Great Western, Apollo, Watson's.
CALCUTTA.—Great Eastern, Grand, Spence's, Continental.
CAWNPORE.—Civil and Military.

DELHI.—Cecil, Maiden's, Civil and Military.
GOA.—Crescent.
GULMARG.—Nedou's.

GWALIOR.—Gwalior Hotel.
HYDERABAD (Deccan).—Montgomery's.

JEYPORE.—Jeypore, Kaisar-i-Hind, The New Hotel.
JUBBULPORE.—Jackson's.

KARACHI.—North-Western, Killarney
LAHORE.—Nedou's, Cecil.

LUCKNOW.—Royal, Carlton, Imperial, Civil and Military.

MADRAS.—Hotel D'Angelis, Connemara, Brind's.
MANDALAY.—Salween House.
MEERUT.—Empress.

PESHAWAR.—Flashmans.
POONA.—Napier, Poona, Connaught.

RANGOON.—Strand, Royal, Minto Mansions
RAWAL PINDI—Flashmans, Imperial.

SECUNDERABAD—Montgomery's.

HOTELS IN PRINCIPAL HILL STATIONS :—

COONOOR.—Glenview.
DARJEELING.—Woodland's, Mount Everest, Grand (Rockville), Drum Druid.
MAHABLESHWAR.—Race View.

MATHERAN.—Rugby.
MOUNT ABU.—Rajputana.

MURREE.—Powell's, Rowbury's, Viewforth.

MUSSOORIE.—Charleville, Savoy.
NAINI TAL.—Metropole, Grand.

OOTACAMUND.—Sylk's, Centre, Firgrove.

PACHMARHI.—Hill.

SIMLA.—Corstorphon's, Grand, Lauries, Longwood, Faletti's, Royal.

An Indian Glossary.

ABKARI.—Excise of liquors and drugs.

AIN.—A timber tree, TERMINALIA TOMENTOSA.

AMIL.—A subordinate executive official under native rule; in Sind the name is still applied to Hindus of the clerical class.

ANICUT.—A dam or weir across a river for irrigation purposes, Southern India.

ANJUMAN.—A communal gathering of Mahomedans.

APHUS.—Believed to be a corruption of ALPHONSE, the name of the best variety of Bombay mango.

AUS.—The early rice crop, Bengal; syn. Ahu, Assam.

AVATAR.—An incarnation of Vishnu.

BABU.—(1) A gentleman in Bengal, corresponding to Pant in the Deccan and Konkan. (2) Thence used by Anglo-Indians of a clerk or accountant.

BABUL.—A common thorny tree, the bark of which is used for tanning, ACACIA ARABICA.

BAGHLA.—(1) A native boat (Buggalow). (2) The common pond heron or paddybird.

BAIRAGI.—A Hindu religious mendicant.

BAJRA or BAJRI.—The bulrush millet, a common food-grain, PENNISETUM TYPHOIDEUM; syn. cambu, Madras.

BAND.—A dam or embankment (Bund).

BANYAN.—A species of fig-tree, FICUS BENGALENSIS.

BARSAT.—(1) A fall of rain, (2) the rainy season.

BASTI.—(1) A village, or collection of huts, (2) A Jain temple, Kanara.

BATTA.—Lit. 'discount,' and hence allowances by way of compensation.

BAZAR.—(1) A street lined with shops, India proper; (2) a covered market, Burma.

BER.—A thorny shrub bearing a fruit like a small plum, ZIZYPHUS JUJUBA.

BEWAR.—Name in Central Provinces for shifting cultivation in jungles and hill-sides; syn. taungya, Burma; jhum, North-Eastern India.

BHADOI.—Early autumn crop, Northern India, reaped in the month Bhadon.

BHANG.—The dried leaves of the hemp plant, CANNABIS SATIVA, a narcotic.

BHANWAR.—Light sandy soil; syn. bhur.

BHARAL.—A Himalayan wild sheep, OVIS NAHURA.

BHENDI.—A succulent vegetable (HIBISCUS ESCULENTUS).

BHUSA.—Chaff, for fodder.

BHUT.—The spirit of departed persons.

BIDRI.—A class of ornamental metalwork, in which blackened pewter is inlaid with silver, named from the town of Bidar, Hyderabad.

BIGHA.—A measure of land, varying widely; the standard bigha is generally five-eighths of an acre.

BIR (BID).—A grassland—North India.

BLACK COTTON SOIL.—A dark-coloured soil, very retentive of moisture, found in Central and Southern India.

BOARD OF REVENUE.—The chief controlling revenue authority in Bengal, the United Provinces and Madras.

BOR.—See BER.

BRINJAL.—A vegetable, SOLANUM MELONGENA; syn. egg-plant.

BUNDER, or bandar.—A harbour or port.

BURUJ.—A bastion in a line of battlements.

CADJAN.—Palm leaves, used for thatch.

CHABUTRA.—A platform of mud or plastered brick, used for social gatherings, Northern India.

CHADAR.—A sheet worn as a shawl by men and sometimes by women. (Chudder.)

CHAITYA.—An ancient Buddhist chapel.

CHAMBAR (CHAMAR).—A caste whose trade is to tan leather.

CHAMPAK.—A tree with fragrant blossoms, MICHELIA CHAMPACA.

CHAPATI.—A cake of unleavened bread. (Chaupatti.)

CHAPRASI.—An orderly or messenger, Northern India; syn. pattawala, Bombay; peon, Madras.

CHARAS.—The resin of the hemp plant, CANNABIS SATIVA, used for smoking.

CHARPAI (charpoy)—A bedstead with four legs, and tape stretched across the frame for a mattress.

CHAUDHRI.—Under native rule, a subordinate revenue official; at present the term is applied to the headman or representative of a trade guild.

CHAUKIDAR.—The village watchman and rural policeman.

CHAUTH.—The fourth part of the land revenue, exacted by the Marathas in subject territories.

CHELA.—A pupil, usually in connexion with religious teaching.

CHHAONI.—A collection of thatched huts or barracks; hence a cantonment.

CHHATRI.—(1) An umbrella, (2) domed building such as a cenotaph.

Note.—According to the Hunterian system of transliteration here adopted the vowels have the following values:—a either long as the a in 'father,' or short as the u in 'cut,' e as the ai in 'gain,' i either short as the i in 'bib,' or long as the ee in 'feel,' o as the o in 'bone,' u either short as the oo in 'good,' or long as the oo in 'boot,' ai as the i in 'mile,' au as the ou in 'grouse.' This is only a rough guide. The vowel values vary in different parts of India in a marked degree. The consonantal values are too intricate for discussion here.

CHIEF COMMISSIONER.—The administrative head of one of the lesser Provinces in British India.

CHIKOR.—A kind of partridge, CACCABIS CHUCAR.

CHIKU.—The Bombay name for the fruit of ACHRAS SAPOTA, the Sapodilla plum of the West Indies.

CHINAR.—A plane tree, PLATANUS ORIENTALIS.

CHINKARA.—The Indian gazelle, GAZELLA BENNETTI, often called 'ravine deer.'

CHITAL.—The spotted deer, CERVUS AXIS.

CHOLAM.—Name in Southern India for the large millet, ANDROPOGON SORGHUM; syn. jowar.

CHOLI.—A kind of short bodice worn by women.

CHUNAM, chuna.—Lime plaster.

CIRCLE.—The area in charge of—(1) A Conservator of forests; (2) A Postmaster or Deputy Postmaster-General; (3) A Superintending Engineer of the Public Works Department.

CIVIL SURGEON.—The officer in medical charge of a District.

COGNIZABLE.—An offence for which the culprit can be arrested by the police without a warrant.

COLLECTOR.—The administrative head of a District in Regulation Provinces corresponding to the Deputy Commissioner in non-regulation areas.

COMMISSIONER.—(1) The officer in charge of a Division or group of Districts; (2) the head of various departments, such as Stamps, Excise, etc.

COMPOUND.—The garden and open land attached to a house. An Anglo-Indian word perhaps derived from 'kumpan', a hedge.

CONSERVATOR.—The Supervising Officer in charge of a Circle in the Forest Department.

COUNCIL BILLS.—Bills or telegraphic transfers drawn on the Indian Government by the Secretary of State in Council.

COUNT.—Cotton yarns are described as 20's, 30's, etc., counts when not more than a like number of hanks of 840 yards go to the pound avoirdupois.

COURT OF WARDS.—An establishment for managing estates of minors and other disqualified persons.

CRORE, karor.—Ten millions.

DAFFADAR.—A non-commissioned native officer in the army or police.

DAH OR DAO.—A cutting instrument with no point, used as a sword, and also as an axe, Assam and Burma.

DAK (dawk).—A stage on a stage coach route. Dawk bungalow is the travellers' bungalow maintained at such stages in days before railways came.

DAKAITI, DACOITY.—Robbery by five or more persons.

DAL.—A generic term applied to various pulses.

DAM.—An old copper coin, one-fortieth of a rupee.

DARBAR.—(1) A ceremonial assembly, especially one presided over by the Ruler of a State, hence (2) the Government of a Native State.

DARGAH.—A Mahomedan shrine or tomb of a saint.

DARI., Dhurrie—A rug or carpet, usually of cotton, but sometimes of wool.

DAROGHA.—The title of officials in various departments; now especially applied to subordinate controlling Officers in the Police and Jail Departments.

DARWAN.—A door-keeper.

DARWAZA.—A gateway.

DEBOTTAR.—Land assigned for the upkeep of temples or maintenance of Hindu worship.

DEODAR.—A cedar, CEDRUS LIBANI or C. DEODARA.

DEPUTY COMMISSIONER.—The Administrative head of a District in non-regulation areas corresponding to the Collector in Regulation Provinces.

DEPUTY MAGISTRATE AND COLLECTOR.—A subordinate of the Collector, having executive and judicial (revenue and criminal) powers; equivalent to Extra Assistant Commissioner in non-regulation areas.

DESAI.—A revenue official under native (Maratha) rule.

DESH.—(1) Native country; (2) the plains as opposed to the hills, Northern India; (3) the plateau of the Deccan above the Ghats.

DESHMUH.—A petty official under native (Maratha) rule.

DEVA.—A deity.

DEVASTHAN.—Land assigned for the upkeep of a temple or other religious foundation.

DHAK.—A tree, BUTEA FRONDOSA, with brilliant orange-scarlet flowers used for dyeing, and also producing a gum; syn. palas, Bengal and Bombay; Chhiul, Central India.

DHAMANI.—A heavy shighram or tonga drawn by bullocks.

DHARMSALA.—A charitable institution provided as a resting-place for pilgrims or travellers, Northern India.

DHATURA.—A stupefying drug, DATURA FASTUOSA.

DHENKLI.—Name in Northern India for the lever used in raising water; syn. picottah.

DHOBI.—A washerman.

DHOTI.—The loincloth worn by men.

DISTRICT.—The most important administrative unit of area.

DIVISION.—(1) A group of districts for administrative and revenue purposes, under a Commissioner; (2) the area in charge of a Deputy Conservator of Forests, usually corresponding with a (revenue) District; (3) the area under a Superintendent of Post Offices; (4) a group of (revenue) districts under an Executive Engineer of the Public Works Department.

DIWAN.—The chief minister in a Native State.

DIWANI.—Civil, especially revenue, administration; now used generally in Northern India of civil justice and Courts.

DOAB.—The tract between two rivers, especially that between the Ganges and Jumna.

DRY CROP.—A crop grown without artificial irrigation.

DRY RATE.—The rate of revenue for unirrigated land.

DUN.—A valley, Northern India.

EKKA.—A small two-wheeled conveyance drawn by a pony, Northern India.

EXTRA ASSISTANT COMMISSIONER.—See Deputy Magistrate and Collector.

FAKIR.—Properly an Islamic mendicant or a mendicant who has no creed, but often loosely used of Hindu mendicants also.

FAMINE INSURANCE GRANT.—An annual provision from revenue to meet direct famine expenditure, or the cost of certain classes of public works, or to avoid debt.

FARMAN.—An imperial (Mughal) order or grant.

FAUJDARI.—Under native rule, the area under a Faujdar or subordinate governor; now used generally of Magistrates' Criminal Courts.

FINANCIAL COMMISSIONER.—The chief controlling revenue authority in the Punjab, Burma and the Central Provinces.

GADDI, Gadi.—The cushion or throne of (Hindu) royalty.

GANJA.—The unfertilised flowers of the cultivated female hemp plant, CANNABIS SATIVA, used for smoking.

GAUR.—Wild cattle, commonly called 'bison', BOS GAURUS.

GAYAL.—A species of wild cattle, BOS FRONTALIS, domesticated on the North-East Frontier; syn. mithan.

GHAT, Ghaut.—(1) A landing-place on a river; (2) the bathing steps on the bank of a tank; (3) a pass up a mountain; (4) in European usage, a mountain range. In the last sense especially applied to the Eastern and Western Ghats.

GHATWAL.—A tenure-holder who originally held his land on the condition of guarding the neighbouring hill passes (ghats), Bengal.

GHI, Ghee,—Clarified butter.

GINGELLY.—See TIL.

GODOWN.—A store room or warehouse. An Anglo-Indian word derived from the Malay 'gadang.'

GOPURAM.—A gateway, especially applied to the great temple gateways in Southern India.

GOSAIN, Goswami.—A (Hindu) devotee; lit. one who restrains his passions.

GOSHA.—Name in Southern India for 'caste' women; lit. 'one who sits in a corner'; syn. parda.

GRAM.—A kind of pea, CICER ARIETINUM. In Southern India the pulse DOLICHOS BIFLORUS is known as horse gram.

GUARANTEED.—(1) A class of Native States in Central India; (2) A class of railways.

GUNJ.—The red seed with a black 'eye' of ABRUS PRECATORIUS, a common wild creeper, used as the official weight for minute quantities of opium 12th TOLA.

GUR, Goor.—Crude sugar; syn. jaggery, southern India; tanyet, Burma.

GURAL.—A Himalayan goat antelope, CEMAS GORAL.

GURU.—(1) A Hindu religious preceptor; (2) a schoolmaster, Bengal.

HAJ.—Pilgrimage to Mecca.

HAJJI.—A mahomedan who has performed the haj. He is entitled to dye his beard red.

HAKIM.—A native doctor practising the Mahomedan system of medicine.

HALALKHOR.—A sweeper or scavenger; lit. one to whom everything is lawful food.'

HALI.—Current. Applied to coin of Native States, especially Hyderabad.

HAMAL.—(1) A porter or cooly, (2) a house servant.

HEJIRA. (HIJRAH)—The era dating from the flight of Mahomed to Mecca, June 20th, 622 A.D.

HILSA.—A kind of fish, CLUPEA ILISHA.

HTI.—An iron pinnacle placed on a pagoda in Burma.

HUKKA, HOOKAH.—The Indian tobacco pipe.

IDGAH.—An enclosed place outside a town where Mahomedan services are held on festivals known as the Id., etc.

INAM.—Lit. 'reward'. Hence land held revenue free or at a reduced rate, often subject to service. See DEVASTHAU, SARAMJAM, WATAN.

INUNDATION CANAL.—A channel taken off from a river at a comparatively high level, which conveys water only when the river is in flood.

JACK FRUIT.—Fruit of ARTOCARPUS INTEGRIFOLIA, ver. PHANAS.

JAGGERY, jagri.—Name in Southern India for crude sugar; syn. gur.

JAGIR.—An assignment of land, or of the revenue of land held by a Jagirdar.

JEMADAR.—A native officer in the army or police.

JHIL.—A natural lake or swamp, Northern India; syn. bil, Eastern Bengal and Assam.

JIHAD.—A religious war undertaken by Musalmans.

JIRGA.—A council of tribal elders, North-West frontier.

JOWAR.—The large millet, a very common food-grain, ANDROPOGON SORGHUM, or SORGHUM VULGARE; syn. cholam and joia, in Southern India.

JUDICIAL COMMISSIONER.—An officer exercising the functions of a High Court in the Central Provinces, Oudh, and Sind.

KACHERI, kachahri.—An office or office building, especially that of a Government official.

KADAR, karbi.—The straw of jowari (*q. v.*)—a valuable fodder.

KAJU, kashew.—The nut of ANACARDIUM OCCIDENTALE largely grown in the Konkan.

KAKAR.—The barking deer, CERVULUS MUNTJAC.

KALAR, kallar.—Barren land covered with salt or alkaline efflorescences, Northern India.

KAMARBAND, Cummerbund.—A waistcloth, or belt.

KANAT.—The wall of a large tent.

KANGAR.—A kind of portable warming-pan, carried by persons in Kashmir to keep themselves warm.

KANKAR.—Nodular limestone, used for metalling roads, as building stones or for preparation of lime.

KANS.—A coarse glass which spreads and prevents cultivation especially in Bundelkhand, SACCHARUM SPONTANEUM.

KANUNGO.—A revenue Inspector.

KARAIT.—A very venomous snake, BUNGARUS CANDIDUS or CAERULEUS.

KARBHARI.—A manager.

KAREZ.—Underground tunnels near the skirts of hills, by which water is gradually led to the surface for irrigation, especially in Baluchistan.

KARKUN.—A clerk or writer, Bombay.

KARMA.—The doctrine that existence is conditioned by the sum of the good and evil actions in past existences.

KARNAM.—See PATWARI.

KAZI.—Under native rule, a judge administering Mahomedan law. Under British rule, the kazi registers marriages between Mahomedans and performs other functions, but has no powers conferred by law.

KHALASI.—A native fireman, sailor, artilleryman, or tent-pitcher.

KHALSA.—Lit. 'pure.' (1) Applied especially to themselves by the Sikhs, the word Khalsa being equivalent to the Sikh community; (2) land directly under Government as opposed to land alienated to grantees, etc., Northern India.

KHANDI, candy.—A weight especially used for cotton bales in Bombay equivalent to 20 mds.

KHARAB.—In Bombay of any portion ran assessed survey No. which being uncultivable is left unassessed.

KHARIF.—Any crops sown just before or during the main S. W. monsoon.

KHAS.—Special, in Government hands. Khas tahasildar, the manager of a Government estate.

KHASADAR.—Local levies of foot soldiers, Afghanistan.

KHAS-KHAS, Kus-Kus.—A grass with scented roots, used for making screens which are placed in doorways and kept wet to cool a house by evaporation, ANDROPOGON SQUARROSUS.

KHEDDA, kheda.—A stockade into which wild elephants are driven; also applied to the operations for catching.

KHICHADI, kejjeree.—A dish of cooked rice and other ingredients, and by Anglo-Indians specially used of rice with fish.

KHILAT.—A robe of honour.

KHUTBA.—The weekly prayer for Mahomedans in general and for the reigning sovereign in particular.

KILLA.—A fort.

KINCOB, kamkhwab.—Silk textiles brocaded with gold or silver.

KODALI.—The implement like a hoe or mattock in common use for digging; syn. mamuti, Southern India.

KONKAN.—The narrow strip of low land between the Western ghats and the sea.

KOS.—A variable measure of distance, usually estimated at about two miles. The distance between the kos-minars or milestones on the Mughal Imperial roads averages a little over 2 miles, 4 furlongs, 150 yards.

KOT.—Battlements.

KOTHI.—A large house.

KOTWAL.—The head of the police in a town, under native rule. The term is still used in Hyderabad and other parts of India.

KOTWALI.—The chief police station in a head-quarters town.

KULKARNI.—See PATWARI.

KUMBHAR.—A potter.

KURAN.—A big grass land growing grass fit for cutting.

KYARI.—Land embanked to hold water for rice cultivation.

KYAUNG.—A Buddhist monastery, which always contains a school, Burma.

LAKH, lac.—A hundred thousand.

LAMBARDAR.—The representative of the co-sharers in a zamindari village, Northern India.

LANGUR.—A large monkey, Semnopithecus entellus.

LASCAR, correct lashkar.—(1) an army, (2) in English usage a native Sailor.

LAT.—A monumental pillar.

LATERITE.—A vesicular material formed of disintegrated rock, used for buildings and making roads; also probably valuable for the production of aluminium. Laterite produces a deep brichord soil.

LINGAM.—The phallic emblem, worshipped as the representative of Shiva.

LITCHI.—A fruit tree grown in North India (LITCHI CHINENSIS).

LONGYI.—A waistcloth, Burma.

LOTA.—A small brass water-pot.

LUNGI, loongi—(1) A turban; (2) a cloth worn by women.

MADRASA.—A school especially one for the higher instruction of Mahomedans.

MAHAJAN.—The guild by Hindu or Jain merchants in a city. The head of the Mahajanssi, the Nagarsheth (*q. v.*).

MAHAL.—(1) Formerly a considerable tract of country; (2) now a village or part of a village for which a separate agreement is taken for the payment of land revenue; (3) a department of revenue, *e.g.*, right to catch elephants, or to take stone; (4) in Bombay a small Taluka under a MAHALKARI.

MAHANT.—The head of a Hindu conventual establishment.

MAHARAJA.—A title borne by Hindus, ranking above Raja.

MAHSEER, mahasir.—A large carp, BARBUSOR (lit. 'the big-headed').

MAHUA.—A tree, BASSIA LATIFOLIA, producing flowers used (when dried) as food or for distilling liquor, and seeds which furnish oil.

MAIDAN.—An open space of level ground; the park at Calcutta.

MAJOR WORKS.—Irrigation works for which separate accounts are kept of capital, revenue, and interest.

MAKTAB.—An elementary Mahomedan school.

MALGUZAR (revenue payer).—(1) The term applied in the Central Provinces to a co-sharer in a village held in ordinary proprietary tenure; (2) a cultivator in the Chamba State.

MALI.—A gardener.

MAMLATDAR.—The officer in charge of a taluka, Bombay, whose duties are both executive and magisterial; syn. tahasildar.

MANDAP, or mandapam.—A porch or pillared hall, especially of a temple.

MANGOSTEEN.—The fruit of GARCINIA MANGOSTANA.

MARKHOR.—A wild goat in North Western India, CAPRA FALCONERI.

MASJID.—A mosque. Jama Masjid, the principal mosque in a town, where worshippers collect on Fridays.

MASNAD.—Seat of state or throne, Mahomedan; syn. 'gaddi.

MATH.—A Hindu conventual establishment.

MAULVI.—A person learned in Muhammadan law.

MAUND, ver. Man.—A weight varying in different localities. The Ry. maund is 80 lbs.

MAYA.—Sanskrit term for delusion.

MEHEL or MAHAL.—A palace.

MELA.—A religious festival or fair.

MIHRAB.—The niche in the centre of the western wall of a mosque.

MIMBAR.—Steps in a mosque, used as a pulpit.

MINAR.—A pillar or tower.

MINOR WORKS.—Irrigation works for which regular accounts are not kept, except, in some cases, of capital.

MISTRI.—(1) a foreman, (2) a cook.

MONSOON.—Lit. 'season,' and specifically (1) The S. W. Monsoon, which is a Northward extension of the S. E. trades, which in the Northern Summer cross the equator and circulate into and around the low pressure area over North India, caused by the excessive heating of the land area, and (2) The N. E. monsoon, which is the current of cold winds blowing down during the Northern winter from the cold land areas of Central Asia, giving rain in India only in S. E. Madras and Ceylon through moisture acquired in crossing the Bay of Bengal, and passing across the equator into the low pressure areas of the Australasian Southern summit.

MUFASSAL, mofussil.—The outlying parts of a District, Province or Presidency, as distinguished from the head-quarters (Sadr).

MUKADDAM, muccadum.—A representative or headman.

MUKHTAR (corruptly mukhtiar).—(1) A legal practitioner who has not got a sanad, and therefore cannot appear in court as of right; (2) any person holding a power of attorney on behalf of another person.

MUKHTIARKAR.—The officer in charge of a taluka, Sind, whose duties are both executive and magisterial; syn. tahasildar.

MUKTI, 'release.'—The perfect rest attained by the last death and the final reabsorption of the individual soul into the world—soul, syn. NIRVANA, MOKSHA.

MUNG, mug.—A pulse, PHASEOLUS RADIATUS: syn. mag, Gujarat.

MUNJ.—(1) A tall grass (SACCHARUM MUNJA) in North India, from which mats are woven, and the Brahman sacred thread worn; (2) the said thread.

MUNSHI.—A teacher of Hindustani or any Perso-Arabian language.

MUNSIF.—Judge of the lowest Court with civil jurisdiction.

MURUM, moorum.—Gravel, used for metalling roads.

NACHANI-NAGLI—See RAGI.

NAGARKHANA, Nakkarkhana.—A place where drums are beaten.

NAGARSHETH.—The head of the trading guild of Hindu and Jain Merchants in a city.

NAIB.—Assistant or Deputy.

NAIK.—A leader, hence (1) a local chieftain, in Southern India; (2) a native officer of the lowest rank (corporal) in the Indian army.

NAT.—A demon or spirit, Burma.

NAWAB.—A title borne by Musalmans, corresponding roughly to that of Raja among Hindus.

NAZAR, nazarana.—A due paid on succession or on certain ceremonial occasions.

NET ASSETS.—(1) In Northern India, the rent or share of the gross produce of land taken by the landlord; (2) in Madras and Lower Burma, the difference between the assumed value of the crop and the estimate of its cost of production.

NEWAR.—Broad cockney woven across bedsteads instead of iron slats.

NGAPI.—Pressed fish or salted fish paste, largely made and consumed in Burma.

NILGAI.—An antelope, BOSELAPHUS TRAGOCAMELUS.

NIM, neem.—A tree, MELIA AZADIRACHTA, the berries of which are used in dyeing.

NIRVANA.—See MUKTI.

NIZAM.—A title borne by the ruler of Hyderabad State.

NIZAMAT.—A sub-division of a Native State, corresponding to a British District, chiefly in the Punjab and Bhopal.

NON-AGRICULTURAL ASSESSMENT.—Enhanced assessment imposed when land already assessed as agricultural is diverted to use as a building site or for industrial concerns.

NON-COGNISABLE.—An offence for which the culprit cannot be arrested by the police without a warrant.

NON-OCCUPANCY TENANTS.—A class of tenants with few statutory rights, except in Oudh, beyond the terms in their leases or agreements.

NON-REGULATION.—A term formerly applied to certain Provinces to show that the regulations of full code of legislation was not in force in them.

NULLAH, NALA.—A ravine, watercourse, or drain.

OCCUPANCY TENANTS.—A class of tenants with special rights in Central Provinces, in United Provinces.

PADAUK.—A well known Burmese tree (PTEROCARPUS sp.) from the behaviour of which the arrival of the monsoon is prognosticated.

PADDY.—Unhusked rice.

PAGA.—A troop of horses among the Marathas.

PAGI.—A tracker thieves of strayed or stolen animals.

PAIGAH.—A tenure in Hyderabad State.

PAIK.—(1) A foot soldier; (2) in Assam formerly applied to every free male above sixteen years.

PAIREE.—The name of the second best variety of Bombay mango, distinguishable from the APHUS (*q. v.*) by its pointed tip, and by the colour being less yellow and more green and red.

PALAS.—See DHAK.

PALKI.—A palanquin or litter.

PAN.—The betel vine, PIPE BETLE.

PARAB.—A public place for the distribution of water, maintained by charity.

PARABADI.—A platform with a smaller platform like a dovecot on a centre pole or pillar built and endowed or maintained by charity, where grain is put every day for animals and birds.

PANCHAMA.—Low caste, Southern India.

PANCHAYAT.—(1) A committee for management of the affairs of a caste, village, or town; (2) arbitrators. Theoretically the panchayat has five (panch) members.

PANDIT.—A Hindu title, strictly speaking applied to a person versed in the Hindu scriptures, but commonly used by Brahmans. In Assam applied to a grade of Inspectors of primary schools.

PANSUPARI.—Distribution of PAN and SUPARI (*q. v.*) as a form of ceremonial hospitality.

PARDA, purdah.—(1) A veil or curtain; (2) the practice of keeping women secluded; syn. gosha.

PARDESI.—Foreign. Used in Bombay especially of Hindu servants, syces, &c., from North India.

PARGANA.—Fiscal area or petty sub-division of a tahsil, Northern India.

PASHM.—The fine wool of the Tibetan goat.

PASO.—A waistcloth.

PAT, put.—A stretch of firm, hard clay.

PATEL.—A village headman, Central and Western India; syn. reddi, Southern India, gaonbura, Assam; padhan, Northern and Eastern India; Mukhi, Guzarat

PATIDAR.—A co-sharer in a village, Gujarat.

PATTAWALLA.—See CHAPRASI.

PATWARI.—A village accountant; syn. karnam, Madras; kulkarni, Bombay Deccan; talati, Gujarat; shanbhog, Mysore, Kanara and Coorg; Mandal, Assam; Tapedar, Sind.

PEON.—See CHAPRASI.

PESHKASH.—A tribute or offering to a superior.

PHULAV, (Pilow).—A dish of rice and other ingredients, and by Anglo-Indians specifically used of chicken with rice and spices.

PHULKARI.—An embroidered sheet; lit. flower-work.

PICE, paisa.—A copper or bronze coin worth one farthing; also used as a generic term for money.

PICOTTAH.—A lever for raising water in a bucket for irrigation, Southern India; syn. dhenkul or dhenkuli, or dhikli, Northern India.

PIPAL.—A sacred tree, FICUS RELIGIOSA.

PIR.—A Mahomedan religious teacher or saint.

PLEADER.—A class of legal practitioner.

PONGYI.—A Buddhist monk or priest, Burma.

POSTIN, poshteen.—A coat or rug of sheepskin tanned with the wool on, Afghanistan.

PRANT.—An administrative sub-division in Maratha States, corresponding to a British District (Baroda) or Division (Gwalior); also in Kathiawar.

PRESIDENCY.—A former Division of British India.

PROTECTED.—Forests over which a considerable degree of supervision is exercised, but less than in the case of 'reserved' forests.

PROVINCE.—One of the large Divisions of British India.

PUJA.—Worship, Hindu.

PUJARI.—The priest attached to a temple.

PUNDIT.—See Pandit.

PURANA.—Lit. 'old' Sanskrit (1) applied to certain Hindu religious books, (2) to a geological 'group'; (3) also to 'punch-marked' coins.

PUROHIT—A domestic chaplain or spiritual guide, Hindu.

PWE.—An entertainment, Burma.

RABI.—Any crop sown after the main South West monsoon.

RAGI (ELEUSINE COROCANA).—A small millet used as a food-grain in Western and Southern India; syn. marua, Nagli Nachni.

RAJA.—A title borne by Hindus and occasionally by Musalmans, corresponding roughly to that of Nawab which is peculiar to Musalmans.

RAMOSHI.—A caste whose work is watch and ward in the village lands and hence used of any chaukidar (*q. v.*).

RANA.—A title borne by some Rajput chiefs, equivalent to that of Raja.

RANI.—The wife or widow of a Raja.

RAO.—A title borne by Hindus, either equivalent to, or ranking below, that of Raja.

REGAR.—Name for a black soil in Central and Southern India, which is very retentive of moisture, and suitable for growing cotton.

REGULATION.—A term formerly applied to certain provinces to show that the Regulations or full code of legislation applied to them.

REH.—Saline or alkaline efflorescences on the surface of the soil, Northern India.

RESERVED.—Forests intended to be maintained permanently.

RICKSHAW.—A one or two seat vehicle on two wheels drawn by coolies, used in the hills.

ROHU.—A kind of fish, LABEO ROHITA.

RYOTWARI.—The system of tenure in which land revenue is imposed on the actual occupants of holdings.

SADR, sudder.—Chief (adjective). Hence the headquarters of a District; formerly applied to the Appellate Courts.

SAFFLOWER.—A thistle which yields a yellow dye from its petals and oil from its seeds (CARTHAMUS TINCTORIUS), Ver. Kardai, Kushanti.

SAL.—A useful timber tree in Northern India, SHOREA ROBUSTA.

SAMBAR.—A deer, CERVUS UNICOLOR; syn. jarau.

SAN.—Bombay hemp, CROTALARIA JUNCEA.

SANAD.—(1), A charter or grant, giving its name to a class of States in Central India held under a sanad, (2) any kind of deed of grants.

SANNYASI.—A Hindu mendicant.

SARI.—A long piece of cloth worn by women as a shawl.

SARANJAM.—Land held revenue free or on a reduced quit-rent in consideration of political services rendered by the holder's ancestors.

SARKAR.—(1) The Government; (2) a tract of territory under Muhammadan rule, corresponding roughly to a Division under British administration.

SARSUBAH.—An officer in charge of a Division in the Baroda State corresponding to Commissioner of British territories.

SATI.—Suicide by a widow, especially on the funeral pyre of her husband.

SAWBWA.—A title borne by chiefs in the Shan States, Burma.

SEMAL or cotton tree.—A large forest tree with crimson flowers and pods containing a quantity of floss, BOMBAX MALABARICUM.

SEROW, sarau.—A goat antelope, NEMORHAEDUS BUBALINUS.

SETTLEMENT.—(1) The preparation of a cadastral record, and the fixing of the Government revenue from land; (2) the local inquiry made before Forest Reserves are created; (3) the financial arrangement between the Government of India and Local Governments.

SHANBHOG.—See PATWARI.

SHASTRAS.—The religious law-books of the Hindus.

SHEGADI, seggaree.—A pan on 3 feet with live charcoal in it.

SHER, ser, seer—A weight, or measure varying much in size in different parts of the country. The Railway ser is about 2 lbs.

SHETH, shethia.—A Hindu or Jain merchant.

SHIGURAM.—See TONGA.

SHISHAM or sissu.—A valuable timber tree, DALBERGIA SISSOO.

SILLADAR.—A native trooper who furnishes his own horse and equipment.

SOLA.—A water-plant with a valuable pith, AESCHYNOMENE ASPERA.

SOWAR.—A mounted soldier or constable.

STUPA or tope.—A Buddhist tumulus, usually of brick or stone, and more or less hemispherical, containing relics.

SUBAH.—(1) A province under Mahomedan rule; (2) the officer in charge of a large tract in Baroda, corresponding to the Collector of a British District; (3) a group of Districts or Division, Hyderabad.

SUBAHDAR.—(1) The governor of a province under Mahomedan rule; (2) a native infantry officer in the Indian Army; (3) an official in Hyderabad corresponding to the Commissioner in British territory.

SUB-DIVISION.—A portion of a District in charge of a junior officer of the Indian Civil Service or a Deputy Collector.

SUPARI.—The fruit of the betel palm, ARECA CATECHU.

SUPERINTENDENT.—(1) The chief police officer in a District; (2) the official in charge of a hill station; (3) the official, usually of the Indian Medical Service, in charge of a Central Jail.

SURTI.—Native of Surat, specially used of persons of the Dhed or Mahar caste who work as house servants of Europeans, and whose house speech is Gujarati.

SYCE, sais.—A groom.

TABUT.—See TAZIAH.

TAHSIL.—A revenue sub-division of a District; syn. taluka, Bombay; taluka, Madras and Mysore; township, Burma.

TAHSILDAR.—The officer in charge of a tahsil; syn. Mamlatdar, Bombay; township officer or myo-ok, Burma; Mukhtiarkar, Sind; Vahivatdar, Baroda. His duties are both executive and magisterial.

TAKAVI.—Loans made to agriculturists for seed, bullocks, or agricultural improvements; syn. tagai, Bombay.

TALATI.—See Patwari.

TALAV, or talao.—A lake or tank.

TAIUK, taluka.—The estate of a talukdar in Oudh. A revenue sub-division of a District, in Bombay, Madras and Mysore; syn. tahsil.

TALUKDAR.—A landholder with peculiar tenures in different parts of India. (1) An official in the Hyderabad State, corresponding to the Magistrate and Collector (First Talukdar) or Deputy Magistrates and Collectors (Second and Third Talukdars); (2) a landholder with a peculiar form of tenure in Gujarat.

TAMTAM, tumtum.—A North Indian name for a light trap or cart.

TANK.—In Southern, Western, and Central India, a lake formed by damming up a valley; in Northern India, an excavation holding water.

TAPEDAR.—See PATWARI.

TARAI.—A moist swampy tract; the term especially applied to the tract along the foot of the Himalayas.

TARI, toddy—The sap of the date, palmyra, or cocoanut palm, used as a drink, either fresh or after fermentation. In Northern India the juice of the date is called Sendhi.

TASAR, tussore.—Wild silkworms, ANTHERAEA PAPHIA; also applied to the cloth made from their silk.

TAZIA.—Lath and paper models of the tombs of Hasan and Husain, carried in procession at the Muharram festival; syn. tabut.

TEAK.—A valuable timber tree in Southern and Western India and Burma, TECTONA GRANDIS.

TELEGRAPHIC TRANSFERS.—See Council bills.

THAGI, thuggee.—Robbery after strangulation of the victim.

THAKUR.—(1) The modern equivalent of the caste name Kshattriya in some parts of Northern India; (2) a title of respect applied to Brahmans; (3) a petty chief; (4) a *hill* tribe in the Western Ghats.

THAMIN.—The brow-antlered deer, Burma, CERVUS ELDI.

THANA.—A police station, and hence the circle attached to it.

TIKA.—(1) Ceremonial anointing on the forehead; (2) vaccination.

TIKAM.—The English pickaxe (of which the word is a corruption.)

TIL.—An oilseed, SESAMUM INDICUM; also known as gingelly in Madras.

TINDAL, tandel.—A foreman, subordinate officer of a ship.

TIPAI, Teapoy.—A table with 3 legs, and hence used of any small European style table.

TOLA.—A weight equivalent to 180 grains (troy).

TONGA.—A one or two horsed vehicle with a covered top. syn. SHIGHRAM.

TSINE.—Wild cattle found in Burma and to the southward, Bos SONDAICUS; syn. hsaing and banteng.

UNIT.—A term in famine administration, denoting one person relieved for one day.

URIAL.—A wild sheep in North-Western India, OVIS VIGNEI.

URID, UDID.—A pulse, 'black grain,' (PHASEOLUS MUNGO).

UMBAR.—A wild pig—(FICUS GLOMERATA).

USAR.—Soil made barren by saline efflorescence, Northern India.

VAHIVATDAR.—Officer in charge of a revenue sub-division, with both executive and magisterial functions, Baroda; syn. tahsildar.

VAID or baidya, Bengal.—A native doctor practising the Hindu system of medicine.

VAKIL.—(1) A class of legal practitioner; (2) an agent generally.

VIHARA.—A Buddhist monastery.

VILLAGE.—Usually applied to a certain area demarcated by survey, corresponding roughly to the English parish.

VILLAGE UNION.—An area in which local affairs are administered by a small committee.

WADA or WADI.—(1) an enclosure with houses built round facing a centre yard; (2) private enclosed land near a village.

WAKF.—A Muhammadan religious or charitable endowment.

WAO.—A step well.

WATAN.—A word of many senses. In Bombay Presidency used mostly of the land or cash allowance enjoyed by the person who performs some service useful for Govt. or to the village community.

WAZIR.—The chief minister at a Mahomedan court.

WET RATE.—The rate of revenue for land assured of irrigation.

YOGI.—A Hindu ascetic who follows the yoga system, a cardinal part of which is that it confers complete control over the bodily functions enabling the practiser, for instance to breathe in through one nostril and out at the other.

YUNANI.—Lit. Greek; the system of medicine practised by Mahomedans.

ZAMINDAR.—A landholder.

ZAMINDARI.—(1) An estate; (2) the rights of a landholder, zamindar; (3) the system of tenure in which land revenue is imposed on an individual or community occupying the position of a landlord.

ZANANA.—The women's quarters in a house hence private education of women.

ZIARAT.—A Mahomedan shrine, North-Western Frontier.

ZILA.—A District.

The New Capital.

The transfer of the capital of India from Calcutta to Delhi was announced at the Delhi Durbar on December 12, 1911. The reasons for it were stated in despatches between the Government of India and the Secretary of State published at the time. It had long been recognised as necessary, in the interests of the whole of India, to de-provincialise the Government of India, but this ideal was unattainable as long as the Government of India was located in one Province, and in the capital of that Province—the seat of the Bengal Government—for several months in every year. It was also desirable to free the Bengal Government from the close proximity of the Government of India which had been to the constant disadvantage of that Province. To achieve these two objects the removal of the capital from Calcutta was essential: its disadvantages had been recognised as long ago as 1868, when Sir Henry Maine advocated the change. Various places had been discussed as possible capitals, but Delhi was by common consent the best of them all. Its central position and situation as a railway junction, added to its historical associations, told in its favour; and, as Lord Crewe said in his despatch on the subject, "to the races of India, for whom the legends and records of the past are charged with so intense a meaning, this resumption by the Paramount Power of the seat of venerable Empire should at once enforce the continuity and promise the permanency of British sovereign rule over the length and breadth of the country."

The foundation stones of the new capital were laid by the King Emperor on December 15, 1911, when His Majesty said:—"It is my desire that the planning and designing of the public buildings to be erected will be considered with the greatest deliberation and care so that the new creation may be in every way worthy of this ancient and beautiful city." Subsequently a **town-planning committee** was appointed—consisting of Captain G. S. C. Swinton, Chairman, and Mr. J. A. Brodie and E. L. Lutyens, members—to advise on the choice of a site for, and the lay-out of, the capital. Mr. V. Lanchester was subsequently consulted by Government on some aspects of the question. The terms of their original engagement (subsequently renewed) were stated by the Under Secretary of State to be:—"The members of the committee will receive their travelling and living expenses, and the following fees for a five months' engagement:—Captain Swinton, 500 guineas; Mr. Brodie, 1,750 guineas; Mr. Lutyens, 1,500 guineas. The Secretary of State has also undertaken to refund to the Corporation of Liverpool the amount of Mr. Brodie's salary for the period of the absence."

Delhi and its environs.—In their first report, dated from Simla, 13th June 1912, the Committee explain that, in dealing with the choice of a site, they felt that the following considerations were paramount and must receive the closest and most continual attention:—(*a*) Health and sanitation, (*b*) water-supply and irrigation supply, (*c*) the provision of ample room for expansion, (*d*) an extent of land suitable for the location of buildings of various characters and sizes and for the provision of spacious parks and recreation grounds—To be assumed at 10 square miles for the new city and 15 square miles for the Cantonment—(*e*) Cost of land and the cost of executing necessary works on different sites, (*f*) facility for external and internal communication, (*g*) Civil and Military requirements.

On the east of the Jumna they found no suitable site. To the north of Delhi, on the west of the Jumna, where the Durbar camps were pitched they found some general advantages. The area is, for example, upwind and upstream from the present city of Delhi. The ruins and remains of the Delhis of the past do not cumber the ground. While the external communications might need improvement, the tract is fairly well served by existing railways. Roads and canals and the internal communication could be made convenient without excessive expenditure, and a good deal of money has already been spent on the area. But its disadvantages were found to be overwhelming. The site is too small and much of the land is liable to flooding. Similarly, the western slope of the hills to the south of Delhi the Naraiana plain was found unsuitable, mainly because it cannot be considered to be Delhi, is destitute of historical associations, and is shut out from all view of Delhi.

Southern site chosen.—The Committee finally selected a site on the eastern slopes of the hills to the south of Delhi, on the fringe of the tract occupied by the Delhis of the past. They describe it as follows:—"Standing a little to the Delhi side of the village of Malcha, just below the hills almost in the centre of the site, and looking towards the Jumna, Shahjahan's Delhi on the left fills the space between the ridge and the river. Following down from the present city on the foreshore of the riverain Firoz Shah's Delhi, the site of Indra Prastha, Humayun's fort, Humayun's tomb and Nizamuddin's tomb take the eye in a continuous progress to the rocky eminence on which Ghiyasuddin Tughlak erected his fortress city. On the right the Lal Kot, the Kutb, the Kila Rai Pithora, Siri and Jahanpanah complete the circle of the monuments of ancient Delhis. The mid space in the fore ground is filled by Safdar Jang's Mausoleum and the tombs of the Lodi dynasty, while to the left, towards Delhi, Jey Singh's gnomons and equatorial dials raise their fantastic shapes." The land chosen is free from liability to flood, has a natural drainage, and is not manworn. It is not cumbered with monuments and tombs needing reverent treatment, and the site is near the present centre of the town of Delhi.

Healthiness of Site.—In February, 1913, a Committee consisting of Surgn.-General Sir C. P. Lukis, Mr. H. T. Keeling, A.M.I.C.E., and Major J. C. Robertson, I.M.S., was appointed to consider the comparative healthiness of the northern and southern sites. Their report, dated 4th March, 1913, states that "the Committee, after giving full consideration to the various points discussed in the above note, is bound to advise the Government of India that no doubt can exist as to the superior

healthiness of the southern site, the medical and sanitary advantages of which are overwhelming when compared with those of the northern site."

Report on Northern Site.—In the same month the Town-Planning Committee presented their second report, which dealt with the northern site. This had been elicited by the fact that in December, 1912, Sir Bradford Leslie, an engineer with a distinguished Indian career, had read a paper before the Indian section of the Royal Society of Arts in London, in which he set forth plans for building the new capital on the northern site and producing a fine water effect by a treatment of the river Jumna. This paper aroused considerable attention in England, and its publication synchronised with some letters and articles in the press in India expressing a preference for the northern site. The latter voiced a natural attraction to the north site which the Committee themselves experienced on their first visit to Delhi, and enunciated some predelictions which the Committee had at one time felt and later abandoned. The Town Planning Committee, therefore, undertook to review once more, and in greater detail, the arguments for and against the northern site. They came to the conclusion that:—"The soil is poor on the northern site as compared with the southern. The southern site is already healthy and has healthy surroundings. The northern site even after expenditure on sanitary requirements will never be satisfactory. If the northern site is to be made healthy, this involves going outside the site itself and making the neighbourhood healthy also. The building land to the south is generally good. On the north to be used at all it has in places to be raised at considerable cost. There is no really suitable healthy site for a cantonment in proximity to a city on the northern site. The exigencies of fitting in the requirements to the limited area of the northern site endanger the success of a lay-out as a whole and tend to make for cramping and bad arrangement. The result of placing a city on the northern site appears to the Committee to be the creation of a bad example in place of a good one."

Final Town-Planning Report.—The final report of the Town-Planning Committee, with a plan of the lay-out, was dated 20th March, 1913. The central point of interest in the lay-out, which gives the motif of the whole in Government House, the Council Chamber and the large blocks of Secretariats. This Government centre has been given a position at Raisina hill near the centre of the new city. Advantage is taken of the height of this hill and it is linked with the high ground behind so as to appear a spur of the ridge itself. Behind the hill a raised platform or forum would be built. This will be flanked by the large blocks of Secretariat buildings and terminated at its western end by the mass of Government House and the Council Chamber, with its wide flight of steps, portico and dome. The forum will be approached by inclined ways with easy gradients on both its north and south sides. The axis of the main avenue centres on the north-west gate of Indrapat nearly due east of Government House.

Looking from the eastern end of the forum where the broad avenue enters the Governmental centre and where the great stairways are set, the view is towards the east. "Right and left the roadways go and weld into one the empire of to-day with the empires of the past and unite Government with the business and lives of its people."

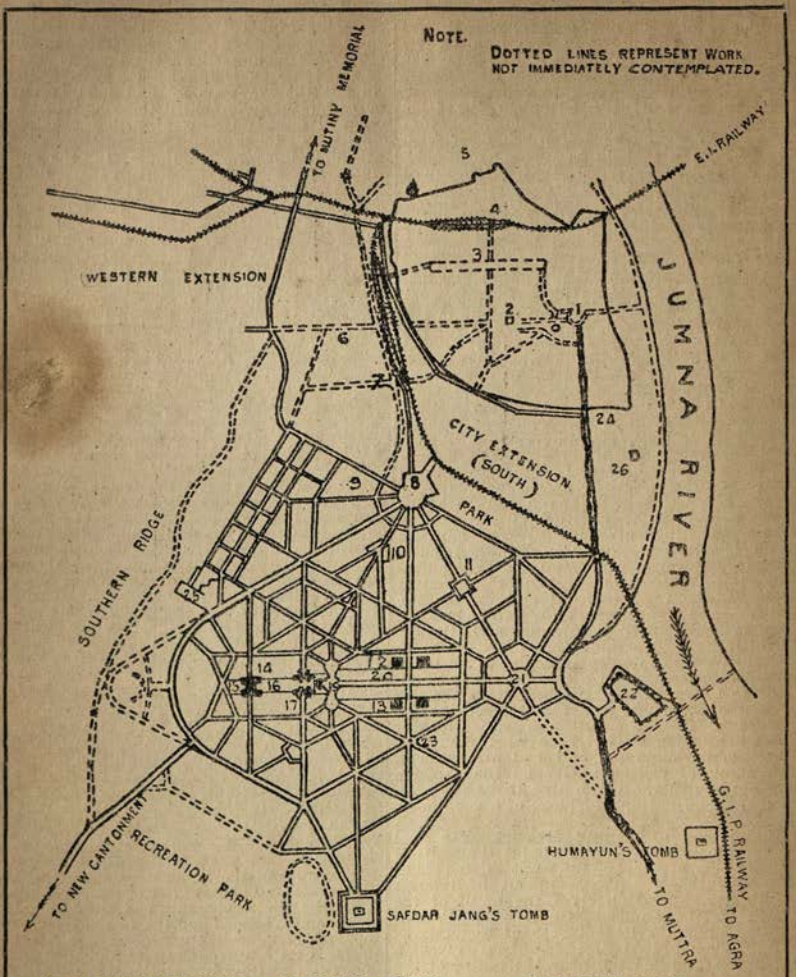
Behind Government House to the west will be its gardens and parks flanked by the general buildings belonging to the Viceregal estate. Beyond these again, on the ridge itself, will be a spacious amphitheatre to be made out of the quarry from which much of the stones for roads and buildings may be cut. Above this and behind it will lie the reservoir and its tower which will be treated so as to break the sky line of the ridge. To the east of the forum, and below it, will be a spacious forecourt defined by trees and linked on to the great main avenue or parkway which leads to Indrapat. Across this main axis, and at right angles to it, will run the avenue to the railway station. This will terminate in the railway station, the post office and business quarters at its northern end, and in the Cathedral at its southern extremity.

To the south-east will lie the park area in which stand the ancient monuments of Safdar Jang's Makhbara and the Lodi tombs. This area can be developed gradually as the city expands and has need of public institutions of various kinds. The axis running north-east from the Secretariat buildings to the railway station and towards the Jama Masjid will form the principal business approach to the present city. At the railway station a *place* will be laid out around which will be grouped the administrative and municipal offices, the banks, the shops and the hotels. On this *place* the post office is placed in symmetrical relation to the railway station.

The processional route will lead down from the railway station, due south to the point where it is intersected by the main east to west axis. Here round a *place* will be gathered the buildings of the Oriental Institute, the Museum, the Library and the Imperial Record Office. To the south-west of the railway station will lie the houses of the local administration and the residences of the European clerks.

Due south of the forum the residence of the Commander-in-Chief will be placed. Round about the Viceregal estate and the forum lies the ground destined for the residences of the Members of Council, the Secretaries and other officials of the Government of India. To the south-west of Government House lies the club. To the south of the club a low ridge divides the tract into two portions. That to the west is well adapted for a golf-course, while the eastern side is designed for a race-course, the ridge itself offering unusual facilities for locating stands and seeing the races.

Communications.—The avenues range from 300 feet to 600 feet with the exception of the main avenue east of the Secretariat buildings where a parkway width of 440 feet has been allowed. The principal avenues in addition to the main avenues are those running at right angles to the main east to west axis



1. KING EDWARD VII MEMORIAL
2. JAMA MASJID
3. CHANDNI CHAUK
4. DELHI MAIN JOINT STATION
5. KASHMIR GATE
6. INTERMEDIATE CITY EXTENSION
7. PROPOSED NEW RY: STATION
8. STATE ENTRANCE TO RY: STATION
9. LADY HARDINGE'S COLLEGE & HOSPITAL FOR WOMEN
10. JANTAR MANTAR
11. UNIVERSITY
12. RECORD OFFICE
13. ETHNOLOGICAL MUSEUM
14. GOVERNMENT HOUSE
15. MOGHAL GARDEN WEST OF GOVERNMENT HOUSE
16. VICEROY'S COURT
17. SECRITARIAT BUILDINGS (IN TWO BLOCKS)
18. GOVERNMENT COURT
19. GREAT PLACE
20. CENTRAL VISTA
21. SITE FOR PROPOSED MONUMENT AT EAST OF VISTA.
22. PURANA KILA
23. CATHEDRAL SITE
24. DELHI GATE
25. TAL-KATORA GARDEN
26. FEROZ SHAH KOTLA

Others form part of a system running from the amphitheatre to the railway station and Commander-in-Chief's residence, and from both the latter to the commemorative column, lying on the axis between Indrapat and Government House is the focal point of the roads and avenues on the parkway.

A lake which can be obtained by river treatment is shown on the plan. The lay-out has been made independent of the water effect, but the Committee think that its ultimate creation will enhance enormously the beauties and general amenities of the new capital: and it should and would become an integral portion of the design now submitted.

The report contains lengthy recommendations concerning water-supply, drainage, sewage system, parks and communications. It is imperative, it says:—"that a complete scheme of railway arrangements designed to serve the whole of the capital, both old and new, should be an essential feature of the lay-out of the Imperial City, and this important matter should not be left to be settled when it is too late to deal with it." The main lines of the lay-out as projected by the Committee have been accepted by Government. The expenses of the new central station and the difficulty experienced in meeting the various railway interests concerned will necessitate the postponement of this part of the scheme, and it has been decided that the needs of New Delhi will be met by a diversion of the existing Agra-Delhi Chord Railway to a line drawn eastward of Humayun's Tomb and Purana Killa and the construction of a new through station near the site of the proposed Central station. Another important modification consists in the reservation of the area lying south of the Delhi and Ajmere Gates of the city for the purpose of the extension of Old Delhi.

Nor is it now proposed to give effect to the extensive scheme of river training designed by the Town Planning Committee; and it is probable that little more will be done in this direction than to create a lake immediately at the end of the central vista and alongside the walls of Indrapat.

Temporary Capital.—For the use of the Government of India during the period of the building of the new capital—a period that will have to be extended owing to the conditions created by the war—an area has been selected along the Alipur Road, between the present civil station of Delhi and the Ridge. The early idea that many of the officials should live under canvas had to be given up, and there are now temporary offices and residences. The architecture and method of construction are similar to those adopted in the exhibition buildings at Allahabad in 1910; but the buildings are expected to outlast the transitional period for which they are intended. They will subsequently be an asset of some value, the site they occupy becoming a suburb of the capital.

Chief Commissioner Appointed.—On October 1, 1912, by proclamation, there was constituted an administrative **enclave of Delhi** under a Chief Commissioner, Mr. W. M. Hailey, I.C.S. The Delhi district of the Punjab, from which this enclave was entirely taken, consisted of three tahsils or subdivisions and the enclave was formed by the central tahsil, that of Delhi, and by such part of the southern tahsil, Ballabgarh, as was comprised within the limits of the police post of Mahrauli. Delhi Province has an area of 528 square miles to which has recently been added an area of 45 square miles to the east of the Jumna river to serve as a grazing ground for the cattle for the city. The total area is, therefore, 573 square miles. On the basis of the Census of 1911, the population of the area originally included in the Province is 3,98,269 and of the new area 14,552, or a total of 4,12,821. The population of the Municipal town of Delhi is 2,29,144.

The Architects' Designs.—At the Royal Academy in 1914 there were exhibited drawings by Mr. Lutyens and Mr. Baker, which, though provisional and rather in the nature of what are called Warrant Designs, show how the architectural problems of the new capital are to be solved. Government House and Secretariat have been planned by them as [illegible] as it were a Capital, facing towards [illegible] The **Secretariat** is to be built on the [illegible] of Raisina hill, the top of which has been levelled for the purpose: behind the Secretariat is to be a raised causeway forming the approach to Government House: and Government House itself is to be built on a high basement constructed on an outcrop of rock. The main processional route to Government House is to be along a sloping way (at a gradient of one in 22½) which leads from a semi-circular piazza, the "Great Court" to the level of the Secretariat buildings.

At the summit of this sloping way is the "**Government Court**", a space of about 1,100 feet in length, and 400 in breadth, flanked to the north and south by the two blocks of Secretariat buildings. These buildings have been designed by Mr. Baker and the aggregate cost will be some £750,000. According to the design the eastern end of each block is marked by deep loggias looking out over the central vista. In the centre of each block is a dome. In the case of the north block this marks an entrance hall: in the south block it surmounts a Conference hall with a suite of cloak and reception rooms. Each block contains three floors: in the lowest are motor garages, godowns, and record rooms: in the middle floor are the offices of Members, Secretaries and other officers: in the top floor are clerks' rooms. An essential feature of the design, and one which sets the character of the whole building, is the provision of loggias and recessed gateways or exedrae giving views through to the fountain courts situate in the interior of the blocks. The verandah so familiar in Indian buildings is altogether absent. The architect relies for control of temperature on thick external walls, together with the thick window shutters adopted so widely in Southern Europe, and the wide *chajja* characteristic of Oriental buildings.

Between the north and south Secretariat blocks, is the way into the "**Viceroy's Court**"—the raised causeway already referred to—leading up to Government House. The Court is about 600 feet in breadth and 1,300 feet in length; it will be treated with grass and waterways and low trees: and should form a dignified approach to the final group of buildings

At a point midway in the causeway, at which will be erected a column presented by the Maharajah of Jaipur, roads lead off to the north and south, forming alternative lines of approach to Government House.

One thus reaches the portico of **Government House.** This portico is raised some twenty feet above the causeway and fifty feet above the surrounding country. The house itself centres round the great Durbar Hall, a domed structure which dominates the scheme of the buildings surrounding it. Grouped round the Durbar Hall are the State rooms and great stairways from the entrance courts on the north and south sides. In the right wing is the Chamber of the Legislative Council of the Governor-General and offices for its Members. In April 1912, the Under Secretary of State indicated in Parliament the decision that this Chamber should be attached to the residence of the Governor-General. It has, therefore, been included in the design of Government House, but it has been assigned a separate approach through a spacious avenue of its own. The left wing contains the private suites. In the rear of the house will be a raised garden, walled and terraced after the manner of the Moghuls, and behind that again, on the level of the surrounding country, a park which will contain the staff houses and quarters. The park will lead up to the rocky slopes of the Ridge which closes in the vista on the west. The house, which has been designed by Mr. Lutyens, will, with its attached quarters, garden and park, and with the Legislative Council wing, cost approximately £500,000.

Style of Architecture.—There had been a prolonged "battle of the styles" over Delhi and if these designs gave satisfaction to neither of the extreme and opposed schools of thought, they clearly showed an endeavour to apply, with due regard for Indian sentiment, the spirit and essence of the great traditions of architecture to the solution of structural problems conditioned upon an Indian climate and Indian surroundings and requirements. To use the language of the architects themselves, it has been their aim "to express, within the limit of the medium and of the powers of its users, the ideal and the fact of British rule in India, of which the New Delhi must ever be the monument."

The inspiration of these designs is manifestly Western, as is that of British rule, but they combine with it distinctive Indian features without doing violence to the principles of structural fitness and artistic unity. Much will depend upon the resourcefulness and ability of the Indian artificers themselves whom the Government of India proposes to bring together in Delhi to give expression, by their decorative work, to the best traditions of skilled Indian craftmanship.

Cost of the Scheme.—It was at first tentatively estimated that the cost of the new capital would be four million sterling and that sum was given in the original despatch of the Government of India on the subject. A revised estimate was given by H. E. the Viceroy in Council in March 1914. That estimate is as follows :—

(*a*) Salaries and Allowances, Rs. 70,18,700.

(*b*) Travelling Allowances of Officers and Establishments, Rs. 6,30,000.

(*c*) Supplies, Services and Contingencies, Rs. 3,78,600.

(*d*) Works Expenditure, (1) Buildings, Rs. 3,59,87,200, (2) Communications, Rs. 29,91,800, (3) Parks and Public Improvements, Rs. 27,34,500, (4) Electric Light and Power, Rs.43,40,700, (5) Irrigation, Rs. 27,49,000, (6) Water Supply, Sewerage, Drainage, etc., Rs. 73,77,900. (7) Purchase of Tools and Plant, Rs. 35,50,600, (8) Survey Camps and General Preliminary Expenditure, Rs. 42,82,100, (9) Maintenance during Construction, Rs. 20,09,000.

(*e*) Acquisition of Land taken up, Rs. 36,48,200.

(*f*) Other Miscellaneous Expenditure, Rs. 6,000.

Deduct anticipated recovery from tools and plant, Rs. 10,00,000.

These figures when added up make an **aggregate total** of Rs. 7,67,04,300, or £5,113,620, but said His Excellency, "as we are anxious to face our liabilities for starting the new City to the fullest extent possible we consider it necessary to make a special provision for contingencies and unforeseen expenditure in excess of the usual provision that has been made of 5 per cent. on the works outlay, by adding a sum of one and a half crores or £1,000,000. We have accordingly a very large reserve to meet future possibilities, which we are not able to foresee at present. I should add that the expenditure of this additional crore and a half on unforeseen contingencies will be strictly controlled by the Government of India and no part of it spent unless absolutely necessary. On the other hand the project estimate contains certain items such as land, residences, water supply, electric power, irrigation, on which recoveries in the form of rent or taxes will in addition to meeting current expenditure partially at any rate cover the interest on capital outlay, while there are other items on which some return account of the sale of leases, general taxes, and indirect receipts may be expected." A re-allocation of the details of this estimate, effected in 1916-17, while varying the provision under sub-heads, does not affect the total.

Progress of the work.—The construction of New Delhi is making satisfactory progress, having regard to the curtailment of the Budget allotment, in consequence of the war.

Much of the 1915-16 grant was expended on the many preliminaries required for transforming the rough site into a fine city by levelling, making roads, digging foundations, collecting material, and manufacturing bricks. A portion of the Indian clerks' quarters and the menials' quarters have been completed, and bungalows have been provided for the occupation of the works staff. Experimental bungalows for the higher officials, to be built in the neighbourhood of Government House, are being put in hand, and are expected to be ready for occupation in 1918.

Meanwhile the central point of interest in the plan has been given careful detailed consideration by the Government and the architects. The basements of Government House and the large blocks of Secretariats by which it will be flanked have been completed; substantial progress has been made with the side court of the Secretariat buildings; and the raised Court between the Secretariat and Government House is so far advanced that the tree planting and provision of waterways is about to be taken in hand. An indication of the progress at the Governmental centre on Raisina Hill was seen in the Royal Academy, where the statues of their Majesties in Coronation robes, which are to be placed in front of Government House, have been exhibited. That of the King, by Mr. Mackenna, is the gift of the Maharaja Scindia of Gwalior, and that of the Queen, by Sir George Frampton, is the gift of the Maharaja of Bikanir. The keen interest of the ruling princes in the transfer of the capital, which is very welcome to them, is further shown in the gift by the Maharaja of Jaipur of the commemorative column in the central avenue. The column, surmounted by the Star of India, will be well seen from the "Great Place" leading to the central avenue.

Two Cathedral Schemes.—In October 1913 a letter was published in *The Times* from the Bishop of Calcutta on the provision of a Cathedral at Delhi. He appealed for £50,000 in addition to any grant given by the Government, and quoted in his letter the following statement of approval by the King-Emperor: "I heartily approve of the project to build a Cathedral in the new city of Delhi. I trust that the appeal for the necessary funds may meet with a generous response, so that in due time the capital of India may possess a Cathedral which in design and character will testify to the life and energy of the Anglican Church and be worthy of its architectural surroundings both of days gone by and of those to come." His Majesty subscribed £100 and the Queen £50 to the fund. The Indian Church Aid Association have received several contributions towards the building fund for the proposed Cathedral Church, in response to the appeal of the Bishop of Calcutta. Cheques may be sent to the Secretary, Indian Church Aid Association, Church House, Westminster, S. W. and crossed Lloyds Bank, St. James's Street, S. W.

A Roman Catholic Cathedral is also projected and Father Paul Hughes, O.M.C., has been touring India collecting money for the Cathedral Fund.

Suggested War Memorial.—Suggestions have been made for completing the central avenue, sited upon Indrapat, by a stately colonnade, entered by three large gateways, to commemorate the Indian heroes of the war. The separate bays would be utilized for distinct memorials, regimental or communal, so that Hindu and Mahomedan, Sikh and Gurkha, Jat and Mahratta would have their respective niches.

Sanitary Improvements.—While the work on the new city has been going forward various improvements in the existing Delhi have been carried out and the sanitary conditions in particular have been much improved. The fly nuisance which was extremely bad in Delhi has been much reduced, and other schemes have been formulated as the result of a sanitary survey which embraced the whole of the city. The most tangible results of these effects is seen in the consistent fall in the death-rate, and the acknowledged reduction in the amount of sickness in Delhi.

Higher College for Chiefs.—It was proposed during 1914 that a higher college for Chiefs should be established at Delhi and in this connexion a conference of Chiefs and Political Officers was held at Delhi, in March, at which the Viceroy presided. It was subsequently announced that subscriptions offered towards the college amounted to about ten and a half lakhs, various recurring sums were promised, and the Government of India also promised to recommend the Secretary of State a grant of Rs. 50,000 a year. Thus the whole capital would come to 12½ lakhs. The proposal is still under consideration.

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Legislation.—

Acts of the Imperial and Provincial Legislative Councils.

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Reports on Police, for each Province, and for Bombay Town and Island, Calcutta, and Rangoon.

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Land Revenue Administration Provincial Reports for Lower Provinces (Bengal), Bihar and Orissa, Assam, United Provinces, Bombay Presidency (including Sind), Punjab, Central Provinces and Berar, Burma, and Madras.

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Report and Records of the Botanical Survey.

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Report on Sanitary Measures in India (Parliamentary Paper).
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Reports of the All-India Sanitary Conferences.
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Prices and Wages.—
Prices and Wages in India.
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Reports of Provincial Wage Censuses.

Customs Tariff.

The customs revenue is mainly derived from the general import duty, certain special import duties such as those on arms, liquors, sugar, petroleum and tobacco, and an export duty on rice. General import duties, which were abolished in 1882, were reimposed in 1894, since which date the general rate of duty on commodities imported into British India by sea has been 5 per cent. *ad valorem*. Cotton was exempted in 1894 when the general duties were received; in December 1894 a 5 per cent duty *ad valorem* was imposed on imported cotton goods and yarns, while an excise duty of 5 per cent was imposed on all yarns of counts above 20 spun at power mills in British India; in February 1896 cotton yarns and threads imported or manufactured in India were freed from duty, while a uniform 3½ per cent. *ad valorem* duty was imposed on all woven cotton goods imported or manufactured in India at power mills. The products of hand looms are exempted. The gross revenue from imports, salt excluded, in 1915-16, was Rs. 7,35,31,000. The estimated gross revenue from this source for 1916-17 is Rs. 8,89,20,000.

The Chief **alterations in the tariff**, which came into force on March 1, 1916, are as follows:—

Goods which before have been dutiable at the rate of 5 per cent. now pay 7½ per cent. *ad valorem*. Machinery, which (with the exception of cartridge-making machinery and machines worked by animal or manual labour) was formerly free, is subject to a duty of 2½ per cent. *ad valorem*, but machinery for cotton spinning and weaving mills remains duty free, as do cotton yarn and thread. Cotton manufactures remain dutiable as before at the rate of 3½ per cent. *ad valorem*. Railway material and ships are to pay 2½ per cent., and coal a specific duty of 8 annas per ton. Iron and steel in bars, plates, sheets, and other manufactured forms, formerly dutiable at 1 per cent. are now to pay 2½ per cent. The rates for silver and petroleum remain as before, but silver plate and silver thread are to pay 15 per cent. The sugar duty is raised from 5 to 10 per cent., and considerable increases have also been made in the rates leviable on alcoholic liquors and tobacco. In addition export duties have been placed on tea and jute.

Schedule II—(Import Tariff).

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	I.—Food, Drink and Tobacco.			
	FISH.		Rs. a.	
1	FISH, SALTED, wet or dry	Indian maund of 82⅔ lbs. avoirdupois weight.	....	Such rate or rates of duty not exceeding twelve annas as the Governor-General in Council may, by notification in the *Gazette of India*, from time to time prescribe.
2	FISHMAWS, including singally and sozille, and sharkfins.	....	*Ad valorem*	7½ per cent.
3	FISH, excluding salted fish (see No. 1)	....	,,	7½ ,, ,,
	FRUITS AND VEGETABLES.			
4	FRUITS AND VEGETABLES, all sorts, fresh, dried, salted or preserved—			
	Almonds without shell	cwt.	80 0	7½ per cent
	,, in the shell	,,	22 0	7½ ,, ,,
	,, kâgazi .. { Persian	,,	75 0	7½ ,, ,,
	{ European	,,	45 0	7½ ,, ,,
	Cashew or cajoo kernels	,,	25 0	7½ ,, ,,
	Cocoanuts, Straits	thousand.	75 0	7½ ,, ,,
	,, other	,,	50 0	7½ ,, ,,
	,, kernel (khopra)	cwt.	20 0	7½ ,, ,,

Schedule II—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	I.—Food, Drink and Tobacco—*contd.*			
	FRUITS AND VEGETABLES—*contd.*		Rs. a.	Rs. a. p.
4	FRUITS AND VEGETABLES, all sorts, fresh, dried, salted or preserved—*contd.*			
	Currants	cwt.	38 0	7½ per cent.
	Dates, dry, in bags	,,	7 12	7½ ,, ,,
	,, wet, in dry baskets and bundles	,,	5 8	2½ ,, ,,
	,, ,, in pots, boxes, tins and crates	,,	9 0	7½ ,, ,,
	Figs, Persian, dried	,,	18 0	7½ ,, ,,
	Garlic	,,	8 0	7½ ,, ,,
	Pistachio nuts	,,	60 0	7½ ,, ,,
	Prunes, Bussora (alu-Bokhara)	....	*Ad valorem*	7½ ,, ,,
	Raisins, black	....	,,	7½ ,, ,,
	,, kishmish, Persian Gulf	....	,,	7½ ,, ,,
	,, Munukka ,, ,,	cwt.	11 0	7½ ,, ,,
	,, other sorts	....	*Ad valorem*	7½ ,, ,,
	Walnuts, all descriptions	....	,,	7½ ,, ,,
	All other sorts of fruits and vegetables, fresh, dried, salted or preserved.	....	,,	7½ ,, ,,
	GRAIN, PULSE AND FLOUR.			
5	GRAIN AND PULSE, all sorts, including broken grain and pulse, but excluding flour (see No. 6).	....	*Ad valorem*	2½ per cent.
6	FLOUR	....	,,	7½ ,, ,,
	LIQUORS.			
7	ALE, Beer, and Porter	Imperial gallon or 6 quart bottles	....	0 4 6
8	CIDER and other fermented liquors	,,	....	0 4 6
9	LIQUEURS, Cordials, Mixtures and other preparations containing spirit—			
	(*a*) Entered in such a manner as to indicate that the strength is not to be tested.	,,	....	14 10 0
	(*b*) If tested	Imperial gallon or 6 quart bottles of the strength of London proof.	....	11 4 0 and the duty to be increased or reduced in proportion as the strength of the spirit exceeds or is less than London proof.
10	PERFUMED SPIRITS	Imperial gallon or 6 quart bottles.	....	18 12 0
11	SPIRIT, which has been *rendered* effectually and permanently unfit for human consumption.	....	*Ad valorem*	7½ per cent.

Schedule II—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	I.—Food, Drink and Tobacco—*contd.*			
	LIQUORS—*contd.*		Rs. a p.	Rs. a. p.
12	All other sorts of SPIRIT	Imperial gallon or 6 quart bottles of the strength of London proof.	....	11 4 0 and the duty to be increased or reduced in proportion as the strength of the spirit exceeds or is less than London proof.
13	WINES—			
	Champagne and all other sparkling wines not containing more than 42 per cent. of proof spirit.		....	4 6 0
	All other sorts of wines not containing more than 42 per cent. of proof spirit.		.....	1 12 2
	Provided that all sparkling and still wines containing more than 42 per cent. of proof spirit shall be liable to duty at the rate applicable to "All other sorts of Spirit."			
	PROVISIONS AND OILMAN'S STORES.			
14	VINEGAR, in casks	....	*Ad valorem*	2½ per cent.
15	PROVISIONS, OILMAN'S STORES, AND GROCERIES, all sorts, excluding vinegar in casks (see No. 14)—			
	Bacon	....	*Ad valorem*	7½ ,, ,,
	Beef and Pork	....	,,	7½ ,, ,,
	Béche de mer	....	,,	7½ ,, ,,
	Butter	lb.	1 8	7½ ,, ,,
	Cassava, Tapioca or Sago	cwt.	12 8	7½ ,, ,,
	Cheese	....	*Ad valorem*	7½ ,, ,,
	China preserves in syrup	cwt. (nett)	30 0	7½ ,, ,,
	,, ,, dry, candied	lb.	0 5	7½ ,, ,,
	Cocum	cwt.	5 8	7½ ,, ,,
	Ghi	,,	70 0	7½ ,, ,,
	Margarine	....	*Ad valorem*	7½ ,, ,,
	Vinegar not in casks—			
	Persians	....	,,	7½ ,, ,,
	Indian	....	,,	7½ ,, ,,
	All other sorts of provisions, oilman's stores, and groceries.	....	,,	7½ ,, ,,

Schedule II—(Import Tariff)—*continued.*

No.	Name of Articles.	Per	Tariff Valuation.	Duty.
	I.—Food, Drink and Tobacco—*contd.*			
	SPICES.			
16	SPICES, all sorts—			
	Betelnuts, raw, whole, split, or sliced, from Goa	cwt.	Rs. a. 13 0	7½ per cent.
	,, ,, ,, ,, ,, ,, Straits and Dutch East Indies.	,,	9 0	7½ ,, ,,
	,, whole, from Ceylon	,,	11 8	7½ ,, ,,
	,, raw, split (sun-dried), from Dutch East Indies.	,,	24 0	7½ ,, ,,
	,, all other sorts	.....	*Ad valorem*	7½ ,, ,,
	Chillies, dry	cwt.	15 0	7½ ,, ,,
	Cloves	,,	40 0	7½ ,, ,,
	,, exhausted	,,	14 0	7½ ,, ,,
	,, stems and heads	,,	7 0	7½ ,, ,,
	,, in seeds, nariavang	,,	13 0	7½ ,, ,,
	Ginger, dry	,,	18 0	7½ ,, ,,
	Mace	lb.	1 6	7½ ,, ,,
	Nutmegs	,,	0 5	7½ ,, ,,
	,, in shell	,,	0 3	7½ ,, ,,
	Pepper, black	cwt.	44 0	7½ ,, ,,
	,, white	,,	60 0	7½ ,, ,,
	All other sorts of spices	....	*Ad valorem*	7½ ,, ,,
	SUGAR.			
17	CONFECTIONERY	....	*Ad valorem*	7½ per cent.
18	SUGAR, all sorts, including Molasses and Saccharine produce of all sorts, but excluding confectionery (see No. 17)—			
	Sugar, crystallised, beet	cwt.	16 12	10 ,, ,,
	,, ,, and soft, refined in China	,,	16 8	10 ,, ,,
	,, ,, ,, ,, from Japan	,,	16 0	10 ,, ,,
	,, ,, ,, ,, from Egypt	,,	16 0	10 ,, ,,
	All other sorts of Sugar—			
	Sugar, crystallised and soft, from Java, 23 Dutch standard and above.	cwt.	16 4	10 ,, ,,
	,, ,, ,, from Java, 16 to 22 Dutch standard.	,,	14 8	10 ,, ,,
	,, ,, ,, from Java, 15 Dutch standard and under.	,,	12 0	10 ,, ,,
	,, ,, ,, from Mauritius, equal to 16 Dutch standard and over.	,,	16 4	10 ,, ,,
	Molasses from Java	,,	2 8	10 ,, ,,
	,, ,, other countries	,,	2 8	10 ,, ,,
	Sugar, all other sorts, including saccharine produce of all kinds.	....	*Ad valorem*	10 ,, ,,
	TEA.			
19	TEA—			
	Tea, black	lb.	0 12	7½ per cent.
	,, green	,,	0 11	7½ ,, ,,

Schedule II—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	I.—Food, Drink and Tobacco—*contd.*		Rs. a.	Rs. a. p.
	OTHER FOOD AND DRINK.			
20	COFFEE..	cwt.	50 0	7½ per cent.
21	HOPS	....	....	Free.
22	SALT	Indian maund of 82⅔ lbs. avoirdupois weight.	....	The rate at which excise duty is for the time being leviable on salt manufactured in the place where the import takes place.
23	SALT imported into British India and issued, in accordance with rules made with the previous sanction of the Governor-General in Council, for use in any process of manufacture; also salt imported into the port of Calcutta and issued with the sanction of the Government of Bengal to manufacturers of glazed stoneware; also salt imported into any port in the provinces of Bengal and Bihar and Orissa and issued, in accordance with rules made with the previous sanction of the Governor-General in Council, for use in curing fish in those provinces.	....	....	Free.
24	ALL OTHER SORTS OF FOOD AND DRINK not otherwise specified.	....	*Ad valorem*	7½ per cent.
	TOBACCO.			
25	TOBACCO, unmanufactured	lb.	....	1 0 0
26	CIGARS AND CIGARETTES	....	*Ad valorem*	50 per cent.
27	All other sorts of TOBACCO, manufactured.. ..	lb.	....	1 8 0
	II.—Raw Materials and produce and articles mainly unmanufactured.			
	COAL, ETC.			
28	COAL, COKE AND PATENT FUEL	Ton.	....	0 8 0
	GUMS, RESINS AND LAC.			
29	GUMS, RESINS AND LAC, all sorts—			
	Copal	....	*Ad valorem*	7½ per cent.
	Cutch and gambier (natural)	cwt.	30 0	7½ „ „
	Gamboge	lb.	1 12	7½ „ „
	Gum Ammoniac	cwt.	30 0	7½ „ „
	„ Arabic	„	20 0	7½ „ „
	„ Bdellium	....	*Ad valorem*	7½ „ „
	„ Benjamin, ras	cwt.	40 0	7½ „ „

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff valuation.	Duty.
	II.—Raw Materials and produce and articles mainly unmanufactured —*contd.*		Rs. a.	Rs. a. p.
29	GUMS, RESINS AND LAC, all sorts—*contd.*			
	Gum Benjamin, cowrie..	cwt.	75 0	7½ per cent.
	,, Bysabol (coarse myrrh)	,,	26 0	7½ ,, ,,
	,, Olibanum of frankincense	....	12 0	7½ ,, ,,
	,, Persian (false)	cwt.	10 0	7½ ,, ,,
	Myrrh	,,	30 0	7½ ,, ,,
	Rosin	,,	15 0	7½ ,, ,,
	All other sorts of gums, gum-resins, and articles made of gum or gum-resin.	....	*Ad valorem*	7½ ,, ,,
	HIDES AND SKINS, RAW.			
30	HIDES AND SKINS, raw or salted..	....	....	Free.
	METALLIC ORES, AND SCRAP IRON OR STEEL FOR RE-MANUFACTURE.			
31	IRON OR STEEL, old..	cwt.	2 8	2½ per cent.
32	METALLIC ORES, all sorts	....	*Ad valorem*	7½ ,, ,,
	OILS.			
33	PETROLEUM, including also naptha and the liquids commonly known by the names of rock-oil, Rangoon-oil, Burma oil, kerosine, paraffin oil, mineral oil, petroline, gasoline, benzol, benzoline, benzine, and any inflammable liquid which is made from petroleum, coal, schist, shale, peat or any other bituminous substance, or from any products of petroleum, but excluding the following classes or petroleum.	Imperial gallon.	....	0 1 6
	Petroleum which has its flashing point at or above two hundred degrees of Fahrenheit's thermometer and is proved to the satisfaction of the Collector of Customs to be intended for use exclusively for the batching of jute or other fibre, or for lubricating purposes.	....	*Ad valorem*	7½ per cent.
	Petroleum which has its flashing point at or above one hundred and fifty degrees of Fahrenheit's thermometer and is proved to the satisfaction of the Collector of Customs to be intended for use exclusively as fuel or for some sanitary or hygienic purpose.	....	*Ad valorem*	7½ ,, ,,
34	All other sorts of animal, essential, mineral, and vegetable non-essential OILS—			
	Cocoanut oil	cwt.	26 0	7½ ,, ,,
	All other sorts of oil	....	*Ad valorem*	7½ ,, ,,

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	II.—Raw materials and produce and articles mainly unmanufactured—*contd.*		Rs. a.	
	SEEDS.			
35	OIL-SEEDS, imported into British India by sea from the territories of any Native Prince or Chief in India.	....	....	Free.
36	SEEDS, all sorts, excluding oil-seeds specified in No. 35.	....	*Ad valorem*	7½ per cent.
	TALLOW, STEARINE AND WAX.			
37	TALLOW AND STEARINE, including grease and animal fat, and WAX of all sorts, not otherwise specified.	....	*Ad valorem*	7½ per cent.
	TEXTILE MATERIALS.			
38	COTTON, raw	....	....	Free.
39	WOOL, raw	....	....	,,
40	TEXTILE MATERIALS, the following:—			
	Silk waste and raw silk including cocoons—			
	Bokhara	lb.	7 0	7½ per cent.
	Floss	....	*Ad valorem*	7½ ,, ,,
	Raw silk—Yellow Shanghai, including re-reeled. Yellow from Indo-China, and places in China other than Shanghai including re-reeled.	lb.	5 8	7½ ,, ,,
		,,	6 0	7½ ,, ,,
	Mathow	,,	3 12	7½ ,, ,,
	Panjam	,,	3 0	7½ ,, ,,
	Persian	,,	4 8	7½ ,, ,,
	Siam	,,	3 10	7½ ,, ,,
	White Shanghai, Thonkoon or Duppion.	,,	3 8	7½ ,, ,,
	,, ,, other kinds including re-reeled.	,,	6 0	7½ ,, ,,
	,, other kinds of China, including re-reeled.	,,	7 10	7½ ,, ,,
	Waste and Kachra	....	*Ad valorem*	7½ ,, ,,
	All other sorts, including cocoons	....	,,	7½ ,, ,,
	Raw Flax, Hemp, Jute and all other unmanufactured textile materials not otherwise specified.	....	,,	7½ ,, ,,
	WOOD AND TIMBER.			
41	FIREWOOD	....	*Ad valorem*	2½ per cent.
42	WOOD AND TIMBER, all sorts, not otherwise specified, including all sorts of ornamental wood.	....	,,	7½ ,, ,,

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	II.—Raw materials and produce and articles mainly unmanufactured—*contd.*		Rs. a.	
	MISCELLANEOUS.			
43	CANES AND RATTANS	....	*Ad valorem*	7½ per cent.
44	COWRIES AND SHELLS, including Tortoise-shell—			
	Chanks—large shells, for cameos	....	,,	7½ ,, ,,
	,, white, live	....	,,	7½ ,, ,,
	,, ,, dead	....	,,	7½ ,, ,,
	Cowras	....	,,	7½ ,, ,,
	Cowries, bazar, common	cwt.	3 0	7½ ,, ,,
	,, yellow, superior quality	,,	5 0	7½ ,, ,,
	,, Maldive	,,	7 0	7½ ,, ,,
	,, Sankhli	,,	100 0	7½ ,, ,,
	Mother-of-pearl, nacre	....	28 0	7½ ,, ,,
	Nakhla	cwt.	125 0	7½ ,, ,,
	Tortoise-shell	lb.	11 0	7½ ,, ,,
	,, nakh	,,	5 0	7½ ,, ,,
	All other sorts, including articles made of shell, not otherwise described.	....	*Ad valorem*	7½ ,, ,,
45	IVORY, unmanufactured—			
	Elephant's grinders	cwt.	300 0	7½ ,, ,,
	,, tusks (other than hollows, centres, and points), each exceeding 20 lb. in weight, and hollows, centres, and points each weighing 10 lb. and over.	,,	850 0	7½ ,, ,,
	Elephants' tusks (other than hollows, centres and points), not less than 10 lb. and not exceeding 20 lb. each, and hollows, centres, and points each weighing less than 10 lb.	,,	750 0	7½ ,, ,,
	Elephants' tusks, each less than 10 lb. (other than hollows, centres, and points).	,,	400 0	7½ ,, ,,
	Sea-cow or moye teeth, each not less than 4 lb..	cwt.	200 0	7½ ,, ,,
	Sea-cow or moye teeth, each not less than 3 lb. and under 4 lb.	,,	170 0	7½ ,, ,,
	Sea-cow or moye teeth, each less than 3 lb. ..	,,	120 0	7½ ,, ,,
	All other sorts unmanufactured not otherwise	,,	*Ad valorem*	7½ ,, ,,
46	MANURES, all sorts, including animal bones and the following chemical manures:—Basic slag, nitrate of soda, muriate of potash, sulphate of potash, kainit salts, nitrate of lime, calcium cyanamide and mineral superphosphates.	....	....	Free.
47	PRECIOUS STONES AND PEARLS, unset *	....	*Ad valorem*	7½ per cent.
48	PULP OF WOOD, RAGS and other paper-making materials.	....	....	Free.
49	ALL OTHER RAW MATERIALS, and produce and articles mainly unmanufactured, not otherwise specified.	....	*Ad valorem*	7½ per cent.

* Pearls unset have been exempted by executive order from payment of duty.

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured.			
	APPAREL.			
50	APPAREL, including drapery, boots and shoes, and military and other uniforms and accoutrements, but excluding uniforms and accoutrements exempted from duty (No. 51) and silver thread (No. 90).	....	*Ad valorem*	7½ per cent.
51	UNIFORMS AND ACCOUTREMENTS appertaining thereto, imported by a public servant for his personal use.	....	....	Free.
	ARMS, AMMUNITION AND MILITARY STORES.			
52	Subject to the exemptions specified in No. 55, ARMS, AMMUNITION AND MILITARY STORES, that is to say,—			Rs. a.
	(1) Firearms other than pistols, including gas and air guns and rifles.	Each.	....	50 0
	(2) Barrels for the same, whether single or double.	,,	....	30 0
	(3) Pistols	,,	....	15 0
	(4) Barrels for the same, whether single or double.	,,	....	10 0
	(5) Main springs and magazine springs for firearms, including gas, guns and rifles.	,,	....	8 0
	(6) Gun stocks and breech blocks	,,	....	5 0
	(7) Revolver cylinders, for each cartridge they will carry.	,,	....	2 8
	(8) Actions (including skeleton and waster), breech bolts and their heads, cocking pieces, and locks (for muzzle-loading arms).	,,	....	1 8
	(9) Machines for making loading or closing cartridges for rifled arms.	,,	....	10 0
	(10) Machines for capping cartridges for rifled arms.	,,	....	2 8
				or 20 per cent. *ad valorem* whichever is higher.
	Proviso 1.—No duty in excess of 20 per cent. *ad valorem* shall be levied upon any of the articles specified in items Nos. 1 to 10 of this entry when they are imported in reasonable quantity, for his own private use, by any person lawfully entitled to possess the same.			
	Proviso 2.—When any articles which have been otherwise imported and upon which duty has been levied or is leviable under items Nos. 1 to 10, are purchased retail from the importer by a person lawfully entitled as aforesaid, in reasonable quantity for his own private use, the importer may apply to the Collector of Customs for refund or remission (as the case may be) of so much of the duty thereon as is in excess of 20 per cent. *ad valorem*; and if such Collector is satisfied as to the identity of the articles and that such importer is in other respects entitled to such refund or remission, he shall grant the same accordingly.			

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	ARMS, AMMUNITION AND MILITARY STORES—*contd.*			
53	GUNPOWDER for cannons, rifles, guns, pistols and sporting purposes.	....	*Ad valorem*	20 per cent.
54	Subject to the exemptions specified in No. 55 all ARTICLES, other than those specified in entry No. 52, which are ARMS OR PARTS OF ARMS within the meaning of the Indian Arms Act, (excluding springs used for air-guns which are dutiable as hardware, under No. 68), all tools used for cleaning or putting together the same, all machines for making, loading, closing or capping cartridges for arms other than rifled arms and all other sorts of ammunition and military stores, and any articles which the Governor General in Council may by notification in the *Gazette of India* declare to be "ammunition" or "military stores" for the purposes of this Act.	....	,,	20 ,, ,,
55	The following classes of ARMS, AMMUNITION AND MILITARY STORES:—	....	....	Free
	(*a*) Articles falling under the 5th, 6th, 8th, 9th or 10th item of No. 52 when they appertain to a firearm falling under the 1st or 3rd item and are fitted into the same case with such firearm;			
	(*b*) Arms forming part of the regular equipment of an officer entitled to wear diplomatic, military, naval or police uniform;			
	(*c*) A sword, a revolver, or a pair of pistols, when accompanying an officer of his Majesty's regular forces, or a commissioned officer of a volunteer corps, or certified by the commandant of the corps to which such officer belongs, or, in the case of an officer not attached to any corps, by the officer commanding the station or district in which such officer is serving, to be imported by the officer for the purpose of his equipment;			
	(*d*) Swords and revolvers which are certified by an Inspector-General of Police to be part of the ordinary equipment of members of the Police force under his charge;			
	(*e*) Swords forming part of the equipment of Indian commissioned officers of His Majesty's army;			

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	ARMS, AMMUNITION AND MILITARY STORES—*contd.*		Rs. a.	Rs. a. p.
55	ARMS, AMMUNITION AND MILITARY STORES—*contd.*			
	(*f*) Swords for presentation as army or volunteer prizes;			
	(*g*) Arms, ammunition and military stores imported with the sanction of the Government of India for the use of any portion of the military forces of a Native State in India which may be maintained and organized for Imperial Service;			
	(*h*) Morris tubes and patent ammunition imported by officers commanding British and Indian regiments or volunteer corps for the instruction of their men.			
56	EXPLOSIVES, namely, blasting gunpowder, blasting gelatine, blasting dynamite, blasting roburite, blasting tonite, and all other sorts, including detonators and blasting fuse.	....	*Ad valorem*	7½ per cent.
	CARRIAGES AND CARTS.			
57	CARRIAGES AND CARTS including motor-cars, motor-cycles and motor-wagons, bicycles, tricycles, jinrikshas, bath chairs, perambulators, trucks, wheel-barrows, and all other sorts of conveyances and component parts thereof.	....	*Ad valorem*	7½ ,, ,,
	CHEMICALS, DRUGS AND MEDICINES.			
58	ANTI-PLAGUE SERUM	....	....	Free.
59	COPPERAS, green	....	*Ad valorem*	2½ per cent.
60	OPIUM and its alkaloids	Seer of 8 tolas.	....	24 0 0
61	QUININE and other alkaloids of cinchona ..	....	....	Free.
62	CHEMICALS, DRUGS AND MEDICINES, all sorts, not otherwise specified—			
	Acid, sulphuric	....	*Ad valorem*	7½ per cent.
	Alkali, Indian (saji-khar)	cwt.	5 0	7½ ,, ,,
	Alum	,,	10 8	7½ ,, ,,
	Arsenic (China mansil)	,,	19 0	7½ ,, ,,
	,, other sorts	....	*Ad valorem*	7½ ,, ,,
	Sal ammoniac	....	*Ad valorem*	7½ ,, ,,
	Soda ash	cwt.	5 0	7½ ,, ,,
	Soda Bicarbonate	,,	6 0	7½ ,, ,,
	Sulphate of Copper	,,	38 0	7½ ,, ,,
	Sulphur (brimstone), flour	,,	7 8	7½ ,, ,,
	,, ,, roll	,,	7 8	7½ ,, ,,
	,, ,, rough	....	*Ad valorem*	7½ ,, ,,

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	CHEMICALS, DRUGS AND MEDICINES —*contd.*		Rs. a.	
62	CHEMICALS, DRUGS AND MEDICINES, all sorts, not otherwise specified—*contd.*			
	All other sorts of chemical products and preparations not otherwise specified ..	....	*Ad valorem*	7½ per cent.
	Aloes, black	....	,,	7½ ,, ,,
	,, Socotra	....	,,	7½ ,, ,,
	Aloe-wood	....	,,	7½ ,, ,,
	Asafœtida (hing)	cwt.	135 0	7½ ,, ,,
	,, coarse (hingra)	,,	35 0	7½ ,, ,,
	Atàry, Persian	....	*Ad valorem*	7½ ,, ,,
	Bánslochan (bamboo camphor)	lb.	0 9	7½ ,, ,,
	Brimstone (amalsara)	....	*Ad valorem*	7½ ,, ,,
	Calumba root	cwt.	8 0	7½ ,, ,,
	Camphor, refined, other than powder ..	lb.	1 6	7½ ,, ,,
	,, in powder	....	*Ad valorem*	7½ ,, ,,
	Cassia lignea	cwt.	20 0	7½ ,, ,,
	China root (chobchini), rough	,,	11 0	7½ ,, ,,
	,, ,, ,, scraped	,,	18 0	7½ ,, ,,
	Cocaine	....	*Ad valorem*	7½ ,, ,,
	Cubebs	cwt.	90 0	7½ ,, ,,
	Galangal, China	,,	12 0	7½ ,, ,,
	Pellitory (akalkara)	....	*Ad valorem*	7½ ,, ,,
	Peppermint, crystals	....	,,	7½ ,, ,,
	Salep	cwt.	180 0	7½ ,, ,,
	Senna leaves	....	*Ad valorem*	7½ ,, ,,
	Storax, liquid (rose mellos or salaras) ..	cwt.	80 0	7½ ,, ,,
	All other sorts of drugs, medicines, and narcotics.	....	*Ad valorem*	7½ ,, ,,
	CUTLERY, HARDWARE, IMPLEMENTS AND INSTRUMENTS.			
63	The following AGRICULTURAL IMPLEMENTS, when constructed so that they can be worked by manual or animal power, namely, winnowers, threshers, mowing and reaping machines, elevators, seed-crushers, chaff-cutters, root-cutters, horse and bullock gears, ploughs, cultivators' scarifiers, harrows, clod-crushers, seed-drill, hay tedders, and rakes.	....	....	Free.
64	CLOCKS AND WATCHES, and parts thereof	....	*Ad valorem*	7½ per cent.
65	CUTLERY	....	,,	7½ ,, ,,
66	The following DAIRY APPLIANCES, when constructed, so that they can be worked by manual or animal power, namely, cream separators, milk sterilizing or pasteurizing plant, milk æratting and cooling apparatus, churns, butter dryers, and butter workers.	....	....	Free.
67	ELECTROPLATED WARE	....	*Ad valorem*	7½ per cent.
68	HARDWARE, IRONMONGERY AND TOOLS, all sorts not otherwise specified.	....	,,	7½ ,, ,,

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*		Rs. a.	
	CUTLERY, HARDWARE, IMPLEMENTS AND INSTRUMENTS—*contd.*			
69	INSTRUMENTS, APPARATUS, AND APPLIANCES, imported by a passenger as part of his personal baggage and in actual use by him in the exercise of his profession or calling.	....	....	Free.
70	TELEGRAPHIC INSTRUMENTS AND APPARATUS, and parts thereof, imported by or under the orders of a railway company.	....	*Ad valorem*	2½ per cent.
71	WATER-LIFTS, SUGAR-MILLS, OIL-PRESSES, and parts thereof, when constructed so that they can be worked by manual or animal power.	....	....	Free.
72	All other sorts of IMPLEMENTS, INSTRUMENTS, APPARATUS AND APPLIANCES, and parts thereof, not otherwise specified.	....	*Ad valorem*	7½ per cent.
	DYES AND COLOURS.			
73	DYEING AND TANNING SUBSTANCES, all sorts, and PAINTS AND COLOURS and painters' materials, all sorts—			
	Alizarine dye, dry, 40 per cent.	lb.	20 0	7½ per cent.
	,, ,, ,, 50 ,,	,,	22 0	7½ ,, ,,
	,, ,, ,, 60 ,,	,,	24 0	7½ ,, ,,
	,, ,, ,, 70 ,,	,,	26 0	7½ ,, ,,
	,, ,, ,, 80 ,,	,,	28 0	7½ ,, ,,
	,, ,, ,, 100 ,,	,,	30 0	7½ ,, ,,
	,, ,, moist, 10 ,,	,,	3 8	7½ ,, ,,
	,, ,, ,, 16 ,,	,,	5 8	7½ ,, ,,
	,, ,, ,, 20 ,,	,,	7 0	7½ ,, ,,
	Aniline ,, moist	,,	3 8	7½ ,, ,,
	,, dry	,,	7 0	7½ ,, ,,
	,, salts	....	*Ad valorem*	7½ ,, ,,
	Avar bark	cwt.	3 12	7½ ,, ,,
	Buzgand (gulpista)	....	*Ad valorem*	7½ ,, ,,
	Cochineal	lb.	1 10	7½ ,, ,,
	Gallnuts (myrabolams)	....	*Ad valorem*	7½ ,, ,,
	,, Persian	cwt.	100 0	7½ ,, ,,
	Madder or manjit	....	*Ad valorem*	7½ ,, ,,
	Orchilla weed	....	,,	7½ ,, ,,
	Sappan wood and root	....	,,	7½ ,, ,,
	Turmeric	....	,,	7½ ,, ,,
	All other sorts of dyeing and tanning materials	....	,,	7½ ,, ,,
	Lead, red, dry	cwt.	34 0	7½ ,, ,,
	,, white, dry	,,	35 0	7½ ,, ,,
	Ochre, other than European, all colours	,,	2 0	7½ ,, ,,
	Paints, composition	.....	*Ad valorem*	7½ ,, ,,
	,, patent driers	....	,,	7½ ,, ,,

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	DYES AND COLOURS—*contd.*		Rs. a.	
73	DYEING AND TANNING SUBSTANCES, all sorts and PAINTS AND COLOURS and painter's materials, all sorts—*contd.*			
	Turpentine	Imperial gallon.	3 8	7½ per cent.
	Verdigris	....	*Ad valorem*	7½ „ „
	Vermillion, Canton	box of 90 bundles.	325 0	7½ „ „
	Zinc, white, dry	....	*Ad valorem*	7½ „ „
	All other sorts of paints, colours and painters' materials not otherwise specified, including glue and putty.	....	„	7½ „ „
	FURNITURE, CABINETWARE AND MANUFACTURES OF WOOD.			
74	FURNITURE, CABINETWARE, and all manufactures of wood not otherwise specified.	....	*Ad valorem*	7½ per cent
	GLASSWARE AND EARTHENWARE.			
75	GLASS AND GLASSWARE, all sorts, Chinese and Japaneseware, lacquered ware, earthenware, China and porcelain.	....	*Ad valorem*	7½ per cent
	HIDES, SKINS AND LEATHER.			
76	HIDES AND SKINS not otherwise specified, LEATHER AND LEATHER MANUFACTURES, all sorts, not otherwise specified.	....	*Ad valorem*	7½ per cent.
	MACHINERY.			
77	MACHINERY, namely, prime-movers and component parts thereof, including boilers and component parts thereof; also including locomotive and portable engines, steam-rollers, fire-engines and other machines in which the prime-mover is not separable from the operative parts.			
	MACHINERY (and component parts thereof), meaning machines or sets of machines to be worked by electric, steam, water, fire or other power not being manual or animal labour or which, before being brought into use, require to be fixed with reference to other moving parts; and including belting of all materials for driving machinery. Provided that the term does not include tools and implements to be worked by manual or animal labour and provided also that only such articles shall be admitted as component parts of machinery as are indispensable for the working of the machinery and are, owing to their shape or to other special quality, not adapted for any other purpose.	....	*Ad valorem*	2½ per cent.
	Note.—This entry includes machinery and component parts thereof made of substances other than metal, but excludes the articles exempted under Nos. 78, 79 and 80.			

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*		Rs. a.	
	MACHINERY—*contd.*			
78	MACHINERY AND COMPONENT parts thereof as defined in No. 77 imported by the owner of a cotton spinning or weaving mill and proved to the satisfaction of the Collector of Customs to be intended for use in a cotton spinning or weaving mill.	....	....	Free.
79	The following ARTICLES USED IN THE MANUFACTURE OF COTTON, namely, bobbins (warping) forks for looms, healds, heald cords, heald knitting needles, laces, lags and needles for dobbies, pickers (buffalo and others), picking bands, picking levers, picking sticks (over and under), reed pliers, reeds, shuttles (for power looms), springs for looms, strappings, and weft forks.	....	....	Free.
80	DRAWING-IN-FRAMES imported by the owner of a cotton weaving mill and proved to the satisfaction of the Collector of Customs to be intended for use in the weaving of cotton.	....	....	Free.
81	MACHINERY and component parts thereof, meaning machines or parts of machines to be worked by manual or animal labour.	....	*Ad valorem*	7½ per cent.
	METALS, IRON AND STEEL.			
82	IRON—			
	ANGLE—			
	Angle, T Lowmoor or Swedish and similar qualities.	....	*Ad valorem*	2½ per cent.
	„ other than Lowmoor or Swedish and similar qualities.	ton	250 0	2½ „ „
	„ other than Lowmoor or Swedish and similar qualities, if galvanized, tinned, or lead coated.	....	*Ad valorem*	2½ „ „
	All other sorts	....	„	2½ „ „
	BAR, ROD AND CHANNEL, INCLUDING CHANNEL FOR CARRIAGES—			
	Bar, Lowmoor and similar qualities	....	„	2½ „ „
	„ Swedish and similar qualities	ton	320 „ 0	2½ „ „
	„ „ „ „ nail-rod, round-rod, and square under ½ inch in diameter.	„	320 0	2½ „ „
	„ Swedish and charcoal, if galvanized, tinned, or lead coated.	....	*Ad valorem*	2½ „ „
	„ other kinds	ton	250 0	2½ „ „
	„ „ „ nail-rod, round-rod and square under half inch in diameter.	„	260 0	2½ „ „
	„ „ „ if galvanized, tinned, or lead coated.	....	*Ad valorem*	2½ „ „
	Channel, including channel for carriages ..	....	„	2½ „ „
	All other sorts	....	„	2½ „ „
	PIG	....	„	2½ „ „
	RICE BOWLS	....	„	2½ „ „

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	METALS, IRON AND STEEL—*contd.*		Rs. a.	
83	IRON OR STEEL—			
	ANCHORS AND CABLES		*Ad valorem*	2½ per cent.
	BEAMS, JOISTS, pillars, girders, screw-piles, bridge work and other such descriptions of iron or steel imported exclusively for building purposes; including also ridging, guttering and continuous roofing.			2½ ,, ,,
	BOLTS and nuts, including hook bolts and nuts for roofing.		,,	2½ ,, ,,
	HOOPS AND STRIPS—			
	Hoops, Lowmoor or Swedish and similar qualities.		,,	2½ ,, ,,
	,, other than Lowmoor or Swedish, if galvanised, tinned, or lead coated.		,,	2½ ,, ,,
	,, other kinds	ton	280 0	2½ ,, ,,
	Strips, Lowmoor or Swedish and similar qualities.		*Ad valorem*	2½ ,, ,,
	,, if galvanised, tinned, lead coated, aluminium coated, chequered or planished.		,,	2½ ,, ,,
	,, other kinds	ton	250 0	2½ ,, ,,
	NAILS, RIVETS AND WASHERS, ALL SORTS—			
	Iron nails, rose, wire and flat-headed	cwt.	20 0	2½ ,, ,,
	,, ,, other kinds, including galvanised, tinned, or lead coated.		*Ad valorem*	2½ ,, ,,
	Steel ,, all sorts		,,	2½ ,, ,,
	Rivets and Washers, iron or steel		,,	2½ ,, ,,
	PIPES AND TUBES, and fittings therefor, such as bends, boots, elbows, tees, sockets, flanges and the like.		*Ad valorem*	2½ ,, ,,
	RAILS, CHAIRS, sleepers, bearing and fish plates, spikes (commonly known as dog spikes), switches, and crossings, other than those described in No. 94, also lever boxes, clips, and tie-bars.		,,	2½ ,, ,,
	SHEETS AND PLATES, all sorts excluding discs and circles which are dutiable under No. 85.			
	Sheets and plates, Lowmoor and similar qualities.		*Ad valorem*	2½ per cent.
	,, ,, Swedish and charcoal		,,	2½ ,, ,,
	,, ,, Swedish and charcoal if galvanized, tinned, or lead coated.		,,	2½ ,, ,,
	Plates, other kinds, above ⅛ inch thick	ton	300 0	2½ ,, ,,
	Sheets, ,, ,, up to ⅛ ,, ,,	,,	310 0	2½ ,, ,,
	Sheets (other than corrugated), and plates, other kinds, if galvanised, tinned, lead coated, aluminium coated, chequered or planished.		*Ad valorem*	2½ ,, ,,
	Sheets, corrugated, galvanised or black	ton	300 0	2½ ,, ,,
	WIRE, including fencing wire and wire rope, but excluding wire netting (which is dutiable under No. 85).		*Ad valorem*	2½ ,, ,,

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	METALS, IRON AND STEEL—*contd.*			
84	STEEL—			
	ANGLE—		Rs. a.	
	Angle, T	ton	250 0	2½ per cent.
	,, ,, if galvanised, tinned, or lead coated .	....	*Ad valorem*	2½ ,, ,,
	,, ,, all other sorts	....	,,	2½ ,, ,,
	BAR, ROD, AND CHANNEL, including channel for carriages—			
	Bar (other than cast steel)	ton	250 0	2½ ,, ,,
	,, Swedish and similar qualities	....	*Ad valorem*	2½ ,, ,,
	,, nail-rod, round-rod, and square, other than Swedish or similar qualities, under ½ inch in diameter.	ton	260 0	2½ ,, ,,
	,, galvanized, tinned, lead coated, planished or polished.	....	*Ad valorem*	2½ ,, ,,
	,, all other sorts	....	,,	2½ ,, ,,
	Channel including channel for carriages ..	....	,,	2½ ,, ,,
	CAST including spring, blistered and tub steel .	....	,,	2½ ,, ,,
	INGOTS, BLOOMS, BILLETS AND SLABS	....	,,	2½ ,, ,,
85	All sorts of IRON AND STEEL and manufactures thereof, not otherwise specified—			
	Iron or steel cans or drums, when imported containing petroleum, which is separately assessed to duty under No. 33, namely:—			
	Iron or steel cans, tinned, other than petrol tins of two gallons capacity.	can	0 3½	7½ ,, ,,
	Iron or steel cans or drums, not tinned, of two gallons capacity.	,,	0 2	7½ ,, ,,
	Iron or steel drums of four gallons capacity—			
	(*a*) with faucet caps	drum	1 0	7½ ,, ,,
	(*b*) ordinary	,,	0 8	7½ ,, ,,
	Iron or steel, all other sorts, including discs or circles and wire-netting.	....	*Ad valorem*	7½ ,, ,,
	METALS, OTHER THAN IRON AND STEEL.			
86	CURRENT SILVER, NICKEL, BRONZE, AND COPPER COIN of the Government of India.	....	....	Free.
87	GOLD BULLION AND COIN	....	....	Free.
88	LEAD, sheets, for tea-chests	....	*Ad valorem*	2½ per cent.
89	SILVER, BULLION OR COIN, not otherwise specified (*See* Nos. 86 and 136).	ounce	....	Rs. a. p. 0 4 0

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	METALS, OTHER THAN IRON AND STEEL—*contd.*		Rs. a.	
90	SILVER PLATE, SILVER THREAD and wire and SILVER MANUFACTURES, all sorts.	....	*Ad valorem*	10 per cent.
91	ALL SORTS OF METALS OTHER THAN IRON AND STEEL, and manufactures thereof, not otherwise specified—			
	Brass, orsidue and leaves, European	....	*Ad valorem*	7½ per cent.
	,, ,, ,, China..	....	,,	7½ ,, ,,
	,, patent or yellow metal sheets and sheathing, weighing, 1 lb. or above per square foot, and braziers and plates.	cwt.	85 0	7½ ,, ,,
	,, patent or yellow metal (old)	,,	40 0	7 ,, ,,
	,, sheets, flat or in rolls, and sheathing, weighing less than 1 lb. per square foot.	....	*Ad valorem*	7½ ,, ,,
	,, wire	....	,,	7½ ,, ,,
	,, all other sorts	....	,,	7½ ,, ,,
	Copper, bolt and bar, rolled	....	,,	7½ ,, ,,
	,, braziers, sheets, plates and sheathing..	cwt.	84 0	7½ ,, ,,
	,, nails and composition nails	....	*Ad valorem*	7½ ,, ,,
	,, old	cwt.	50 0	7½ ,, ,,
	,, pigs, tiles, ingots, cakes, bricks and slabs.	,,	80 0	7½ ,, ,,
	,, China, white, copperware	lb.	2 4	7½ ,, ,,
	,, foil or dankpana, white, 10 or 11 in. × 4 to 5 in.	hundred leaves	5 8	7½ ,, ,,
	,, foil or dankpana, coloured, 10 to 11 in. × 4 to 5 in.	,,	6 0	7½ ,, ,,
	,, wire, including phosphor-bronze ..	....	*Ad valorem*	7½ ,, ,,
	,, all other sorts, unmanufactured and manufactured, except current coin of the Government of India which is free.	....	,,	7½ ,, ,,
	German silver	....	*Ad valorem.*	7½ per cent.
	Gold leaf	....	,,	7½ ,, ,,
	Lametta	....	,,	7½ ,, ,,
	Lead, all sorts (except sheets for tea chests) ..	....	,,	7½ ,, ,,
	Quicksilver	lb.	3 4	7½ ,, ,,
	Shot bird	cwt.	34 0	7½ ,, ,,
	Tin, block	,,	14 0	7½ ,, ,,
	,, oil, and other sorts	....	*Ad valorem*	7½ ,, ,,

Schedule II.—(Import Tariff)—*continued.*

No.	Names and Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	METALS, OTHER THAN IRON AND STEEL—*contd.*			
91	ALL SORTS OF METALS OTHER THAN IRON AND STEEL, and manufactures thereof, not otherwise specified—*contd.*		Rs. a.	
	Zinc or spelter, nails	....	*Ad valorem.*	7½ per cent.
	,, ,, tiles or slabs, soft	cwt.	100 0	7½ ,, ,,
	,, ,, ,, ,, hard	,,	75 0	7½ ,, ,,
	,, ,, all other sorts including boiler tiles.	....	*Ad valorem*	7½ ,, ,,
	All other sorts of metals, and manufactures thereof.	....	,,	7½ ,, ,,
	PAPER, PASTEBOARD AND STATIONERY.			
92	TRADE CATALOGUES AND ADVERTISING CIRCULARS IMPORTED BY PACKET, BOOK OR PARCEL POST.	....	....	Free.
93	PAPER AND ARTICLES MADE OF PAPER AND PAPIER MACHE, PASTEBOARD, MILLBOARD, AND CARD-BOARD all sorts, and STATIONERY including ruled or printed forms and account and manuscript books, labels, advertising circulars, sheet or card almanacs and calendars, Christmas, Easter and other cards, including cards in booklet form; including also wastepaper and old newspapers for packing; but excluding trade catalogues and advertising circulars imported by packet, book, or parcel post.	....	*Ad valorem*	7½ per cent.
	RAILWAY PLANT AND ROLLING STOCK.			
94	RAILWAY MATERIAL for permanent-way and rolling stock, namely, cylinders, girders, and other material for bridges, rails, sleepers, bearing and fish-plates, fish-bolts, chairs, spikes, crossings, sleeper fastenings, switches, interlocking apparatus, brake gear, couplings and springs, signals, turn-tables, weigh-bridges, engines, tenders, carriages, wagons, traversers, trollies, trucks and component parts thereof; also the following articles when imported by or under the orders of a railway company, namely, cranes, water cranes, water tanks and standards, wire and other materials for fencing.	....	*Ad valorem*	2½ per cent.
	Provided that for the purpose of this entry "railway" means a line of railway subject to the provisions of the Indian Railways Act, 1890, and includes a railway constructed in a Native State under the suzerainty of His Majesty and also such tramways as the Governor-General in Council may, by notification in the *Gazette of India*, specifically include therein.			

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	RAILWAY PLANT AND ROLLING STOCK —*contd.*			
94	RAILWAY MATERIAL for permanent-way, etc. —*contd.* Provided also that only such articles shall be admitted as component parts of railway material as are indispensable for the working of railways and are, owing to their shape or to other special quality, not adapted for any other purpose.			
	YARNS AND TEXTILE FABRICS.			
95	COTTON TWIST AND YARN, and COTTON SEWING OR DARNING THREAD.	....	....	Free.
96	SECOND-HAND or USED GUNNY BAGS made of jute	....	....	Free.
97	YARNS AND TEXTILE FABRICS, that is to say —			
	Cotton piece goods, thread other than sewing or darning thread, and all other manufactured cotton goods not otherwise specified.	....	*Ad valorem*	7½ per cent.
	Flax twist and yarn and manufactures of flax	....	,,	7½ ,, ,,
	Haberdashery and Millinery	....	,,	7½ ,, ,,
	Hemp manufactures	....	,,	7½ ,, ,,
	Hosiery, excluding cotton hosiery (*see* No. 95)..	....	,,	7½ ,, ,,
	Jute twist and yarn and jute manufactures, excluding second-hand or used gunny bags (*see* No. 96).	....	,,	7½ ,, ,,
	Silk yarn, noils, and warps, silk thread, silk piece-goods and other manufactures of silk.	....	,,	7½ ,, ,,
	Woollen yarn, knitting wool and other manufactures of wool including felt.	....	,,	7½ ,, ,,
	All other sorts of yarns and textile fabrics, not otherwise specified.	....	,,	7½ ,, ,,
	MISCELLANEOUS.			
98	ART, the following works of :—(1) statuary and pictures intended to be put up for the public benefit in a public place, and (2) memorials of a public character intended to be put up in a public place, including the materials used, or to be used in their construction, whether worked or not.	....	....	Free.
99	ART, works of, excluding those specified in No. 98.	....	*Ad valorem*	7½ per cent.
100	BOOKS, printed, including covers for printed books, maps, charts, and plans, proofs, music and manuscripts.	....	....	Free.
101	BRUSHES AND BROOMS	....	*Ad valorem*	7½ per cent.
102	BUILDING AND ENGINEERING MATERIALS, including asphalt, bricks, cement, chalk and lime, clay, pipes of earthenware, tiles and all other sorts of building and engineering materials not otherwise specified.	....	,,	7½ ,, ,,

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	MISCELLANEOUS—*contd.*		Rs. a.	
103	CANDLES	....	*Ad valorem*	7½ per cent.
104	CORDAGE AND ROPE AND TWINE OF VEGETABLE FIBRE.	....	,,	7½ ,, ,,
105	FIREWORKS	....	,,	7½ ,, ,,
106	FURNITURE, TACKLE AND APPAREL, not otherwise described, for steam, railway, rowing and other vessels.	....	,,	7½ ,, ,,
107	Ivory, manufactured	....	,,	7½ ,, ,,
108	JEWELLERY AND JEWELS, including gold plate and other manufactures of gold, but excluding silver plate and other manufactures of silver (*see* No. 90).	....	*Ad valorem*	7½ per cent.
109	MATCHES	....	,,	7½ ,, ,,
110	MATS AND MATTING	....	,,	7½ ,, ,,
111	OILCAKES	....	,,	7½ ,, ,,
112	OILCLOTH AND FLOOR CLOTH	....	,,	7½ ,, ,,
113	PACKING—ENGINE AND BOILER—all sorts, excluding packing forming a component part of any article included in No. 77 and No. 94.	....	,,	7½ ,, ,,
114	PERFUMERY, excluding perfumed spirits (*see* No. 10)—			
	Gowla husked and unhusked	cwt.	150 0	7½ ,, ,,
	Kapurkachri (zedoary)	,,	20 0	7½ ,, ,,
	Patch leaves (patchouli)	,,	15 0	7½ ,, ,,
	Rose-flowers, dried	,,	18 0	7½ ,, ,,
	Rose-water	Imperial gallon.	2 8	7½ ,, ,,
115	PITCH, TAR AND DAMMER	....	*Ad valorem*	7½ ,, ,,
116	POLISHES AND COMPOSITIONS	....	,,	7½ ,, ,,
117	PRINTING AND LITHOGRAPHING MATERIAL, namely, presses, type, ink, brass rules, composing sticks, chases, imposing tables, and lithographic stones, stereo-blocks, roller moulds, roller frames and stocks, roller composition, standing screw and hot presses, perforating machines, gold blocking presses, stereotyping apparatus, metal furniture, paper folding machines, and paging and numbering machines, but excluding paper (*see* No. 93).	....	,,	2½ ,, ,,
118	PRINTS, ENGRAVINGS AND PICTURES, including photographs and picture-cards.	....	,,	7½ ,, ,,
119	RACKS for the withering of tea leaf	....	,,	2½ ,, ,,

Schedule II.—(Import Tariff)—*concluded.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—*contd.*			
	MISCELLANEOUS—*contd.*		Rs. a.	
120	RUBBER tyres for motors and motor cycles, and rubber tubes for tyres, and other manufactures of rubbers not otherwise specified.	....	*Ad valorem*	7½ per cent.
121	SHIPS AND OTHER VESSELS for inland and harbour navigation, including steamers, launches, boats and barges, imported entire or in sections.	....	,,	2½ ,, ,,
122	SMOKERS' REQUISITES, excluding tobacco (*see* Nos. 25 to 27).	....	,,	7½ ,, ,,
123	SOAP	....	,,	7½ ,, ,,
124	STARCH AND FARINA	....	,,	7½ ,, ,,
125	STONE AND MARBLE, and articles made of stone and marble.	....	,,	7½ ,, ,,
126	TEA-CHESTS of Metal or wood whether imported entire or in sections, provided that the Collector of Customs is satisfied that they are imported for the purpose of the packing of tea for transport in bulk.	....	,,	2½ ,, ,,
127	TOILET REQUISITES, not otherwise specified ..	....	,,	7½ ,, ,,
128	TOYS, playing cards and requisites for games and sports.	....	,,	7½ ,, ,,
129	UMBRELLAS, including parasols and sunshades, and fittings therefor.	....	,,	7½ ,, ,,
130	The following ARTICLES, when imported by the owner of a cotton weaving mill and proved to the satisfaction of the Collector of Customs to be INTENDED FOR USE IN THE WEAVING OF COTTON or the baling of woven cotton goods:—			
	Aniline blue, Bisulphate of soda, China clay, Chloride of magnesium, Chloride of zinc, Dressalin, Epsom salts, Farina, Farinina, Flannel taping, Glauber salts, Glutina, Glycerine substitutes, Heald varnish, Hoop iron, Hoop steel, Rivets for bales, Sewing needles, Sizing paste, Sizing wax, Soda ash, Starch, Velvet pulp.	....	....	Free.
131	ALL OTHER ARTICLES wholly or mainly manufactured, not otherwise specified.	....	*Ad valorem*	7½ per cent.
	IV.—Miscellaneous and unclassified.			
132	ANIMALS, living, all sorts	....	....	Free.
133	CORAL	....	*Ad valorem*	7½ per cent.
134	FODDER, bran and pollards	....	,,	7½ ,, ,,
135	SPECIMENS illustrative of natural science, including also antique coins and medals.	....	....	Free.
136	ALL OTHER ARTICLES NOT OTHERWISE SPECIFIED, including articles imported by post.	....	*Ad valorem*	7½ per cent.

Schedule III.—(Export Tariff).

No.	Names of Articles.	Per	Rate of duty.
	Jute other than Bimlipatam Jute.		Rs. a. p.
1	RAW JUTE—		
	(1) Cuttings	Bale of 400 lbs.	1 4 0
	(2) All other descriptions	,, ,, ,, ...	4 8 0
2	JUTE MANUFACTURES when not in actual use as coverings, receptacles or bindings for other goods.		
	(1) Sacking (cloth, bags, twist, yarn, rope and twine).	Ton of 2,240 lbs.	20 0 0
	(2) Hessians and all other descriptions of jute manufactures not otherwise specified.	,, ,, ,, ...	32 0 0
	RICE.		
3	RICE, husked or unhusked, including rice flour, but excluding rice bran and rice dust, which are free.	Indian maund of 82⅔ lbs. avoirdupois weight.	0 3 0
	TEA.		
4	TEA	100 lbs.	1 8 0

THE WAR LEAGUE.

The War League was formed in Karachi in 1915 with the following objects:—

(1) To organise and concentrate the efforts and resources of those who, though unable to proceed to the battle front, are nevertheless anxious to assist Government in every possible way in repelling the enemies of civilisation, and in restoring the Pax Britannica.

(2) To enlighten those who have not had opportunities of following closely the causes that have led up to the War, as to the true facts of the world-situation, the main incidents of the War itself, its cost in human life and material sacrifices; its inevitable course and end, and the desirability of helping actively to bring about the quickest possible downfall and extermination of the enemy invaders.

The Central Committee at present consists of the Hon. Sir Ibrahim Rahimtoola, C.I.E., Bombay; Dr. S. K. Mullick, M.D., Calcutta; the Hon. Mian Mahomed Shafi, C.I.E., Lahore; the Hon. Mr. Ghulam M. Bhurgri, Hyderabad (Sind); the Hon. Sheik Ghulam Hussein Hidayatullah, Hyderabad (Sind); the Hon. Mr. Harchandrai Vishindass, Karachi; Messrs. Jehangir H. Kothari, E. L. Price, Karachi, and M. de P. Webb, C.I.E., Hon. Chief Secretary, Karachi.

Six Honorary Secretaries deal with the affairs of the League throughout India, Burma and Ceylon. The *War League Journal* is the official organ of the League. Several local Divisions (each with its own President, Committee and Secretary) have been formed throughout northern India. The League distributes large quantities of war literature in English and the vernaculars throughout India, Persia and Mesopotamia. The League also actively encourages investment in British and Indian War Loans and has formed a special bank (the Saving and Helping Bank Ltd.) which (*a*) receives deposits of one rupee and upwards and (*b*) advances cash, for the purchase of Indian War Loan. The Bank held over 22 lakhs of War securities at the date of its last Report (30th June 1916). The War League advocates and encourages recruiting, and military service for Indians. The League has over two thousand members on its books including some of the most prominent officers of Government in India.

Office—12, Staff Lines, Karachi.

India and the War.

HOSTILE FIRMS.

It was early realised in India that the adoption, for all purposes, of the classical definition of an enemy would not be sufficient to meet all the political difficulties involved, and on 14th November 1914, with the approval of the Secretary of State, the **Hostile Foreigners(Trading) Order** was issued. The salient feature of this order was the definition of a "hostile foreigner" as a subject of any one of the enemy states without reference to the question of residence. It further gave an absolutely free hand to Government in doubtful cases by defining a hostile firm, as a firm of which a hostile foreigner had been a member or officer on August 3rd, 1914. All such firms or foreigners were forbidden to trade except under a license. The right to refuse such a license or to impose any conditions whatever vested solely in the Government of India. In the event of a license being refused the business assets had to be deposited with Government for disposal at their absolute discretion. It will be seen that the immense scope of the definition of a hostile firm brought within the purview of the order numerous British and neutral firms who happened to have German shareholders, or perhaps a German subject as branch manager. To meet some of these cases **a general exemption** was issued in favour of companies who had no hostile foreigners as officers and merely had capital of amount less than one-third of the whole in enemy hands. An exemption was also made on political grounds in favour of Asiatic subjects of Turkey. In other cases where the interests involved were mainly British, licenses to carry on trade were given, subject, of course, to the provisions of the Royal Proclamations.

There remain the cases on which public attention has naturally been focussed, where the interests involved are mainly or entirely hostile. It was considered desirable that these businesses should be wound up as far as possible and though the Order gave power to Government to take possession and themselves to conduct the liquidations, it was considered more satisfactory to issue to these firms licenses which restricted their operations to winding up, and subjected them to a strict control. The proceeds of such liquidations are being held by Government, and though their total figure has not as yet been made public, it must run into several crores of rupees.

The great majority of firms of this class are of **German origin**, and their principal strongholds in India have been in Bombay, Calcutta and Rangoon. Elsewhere in India the chief feature of their enterprise has been the successful way in which they have fostered indigenous industries through the agency of **Christian Missionaries**. The best known example is the case of the Basel Mission whose products, notably their roofing tiles, are familiar throughout the west of India. Apart from these cases, where religious and commercial endeavours have gone hand in hand, the German has not obtained any very noteworthy foothold in the mofussil. A few planters, a few shopkeepers in the larger towns, a hotel proprietor or two are to be found, but there is no special line that they have made peculiarly their own. These small businesses have been either wound up or placed under Government control in practically every case. The men of military age have been interned and those outside the age limits and the women and children for the most part repatriated.

The more striking features of Teutonic commercial enterprise at the three great ports are different in each case. In **Rangoon** at the outbreak of war there were three large rice-mills whose directors, shareholders and European employees were almost without exception, German. The total value of these three properties has been estimated at three-quarters of a million sterling. The largest of them is believed to have been subsidised by the German Government with a view to their perpetually maintaining a large stock of rice in Germany against emergencies like the present.

One of these rice-mills has been leased to a British firm and all payments are made by the latter to Government account. The other two firms have been made to wind up their affairs, their resulting balance also being deposited in the Government Treasury. One or two less important Teutonic firms engaged in rice milling and a number of small miscellaneous concerns and branches of hostile firms in other parts of India have also been treated in the same way.

The salient feature of the **German enterprise in Calcutta** has been the hide export traffic. In this business a ring of some half dozen German firms had, of late years, established a practical monopoly. As they formed the main channel for the export of an important indigenous product, and as British firms have not proved anxious to undertake this exceedingly unsavoury trade, these firms were for a time allowed to continue their business under British or neutral management, with a strict supervision by the officer appointed by Government to control hostile firms in Bengal. Other German concerns in Calcutta have been wound up. They are mostly small miscellaneous businesses with two exceptions. One is a large import and export firm which has figured prominently in the manganese trade in the Central Provinces and elsewhere. The other is a branch of a German Bank, the only German Banking concern in India.

In Bombay the hostile firms which have aroused most interest have been those engaged in the synthetic colour trade which in the last three decades has almost annihilated the indigenous indigo industry. (See article on Indigo). Prior to the war dyes valued at about one million sterling were annually imported into India, and almost the whole of this quantity came from Germany and was shipped to the five German colour agencies in Bombay. Notwithstanding the

large stocks in India at the beginning of August 1914, the stoppage of this supply has been one of the most serious and most widely felt commercial blows that India has suffered as a result of the war. The textile mills have suffered heavily, but much more serious has been the case of the handloom weavers in small villages all over India. Had Government been far-sighted enough to have assumed control of these stocks immediately war broke out, it is very doubtful if they could have done much to assist the petty weavers and dyers, whose complete lack of organisation renders help on a large scale well nigh impossible. As a matter of fact not only were Government unprepared but the commercial community themselves did not recognise the gravity of the situation until the mischief was done. By the month of November when Government assumed control of these firms three had practically disposed of their whole stock, much of which had gone into the hands of speculators with the result that prices had increased enormously. In a fourth the stock was the property of a neutral, and the fifth alone had a considerable balance. Part of this was distributed among the textile mills and a further quantity sold retail to the smaller consumers. This latter policy did not prove very successful and on the arrival in Bombay of a captured German steamship with a considerable quantity of dyes which had been condemned as Prize of War and were to be sold accordingly, it was decided to auction the balance (about one-sixth of the original stock), after reserving a further supply for distribution to the textile industry. Prices at this auction, though considerably exaggerated in the Press of the day, were none the less very high; and the profits made over the sale of this firm's stock as a whole must have been considerable. These funds are, of course, all held by Government at present, and one of the difficult problems which Government will have to solve when the terms of peace are under consideration will be the disposal of these profits. In addition to these dye-firms, there were in Bombay several considerable import merchants and a number of smaller concerns of a hostile nature to whom also the closure has been applied.

The policy adopted in the early months of the war by Government in the matter of hostile firms came in for a good deal of criticism, largely, be it said, from misinformed quarters. The view of the average patriotic Briton is "wind them up competely," but many critics who have voiced this cry have overlooked the fact that to wind up a concern necessitates not only the payment of all its liabilities and the sale of all its stock, but also the collection of all its debts. The man in the street would no doubt like to see Germany after the war with neither debts nor liabilities in India. But his brother in the next street whose business has suffered from the effects of the war naturally resents being forced to pay his debts to a German firm, even though the firm's moneys are held by Government. In this matter Government has adopted a middle course. **Hostile firms** in liquidation have been allowed to **collect their debts**, but coercion has only been allowed where there were corresponding liabilities to be met, and a number of firms have been closed down after allowing them a reasonable period, with a proportion of their outstandings left under what is in effect a moratorium till the end of the war.

Enemy Trading Ordinance, 1916.—In June, 1916, the Government of India promulgated an ordinance dealing with the liquidation of hostile firms and the property of hostile persons, which brought the legislation in this country into close accord with the present state of the English law. The British Trading with the Enemy Amendment Act of 1916 enables action to be taken in the case of firms whose business, by reason of enemy nationality or association, is carried on wholly or mainly for the benefit of enemy subjects. It also gives power to the Board of Trade to abrogate contracts or transfers, a power which it is believed has for obvious reasons been very sparingly exercised. It also enables a company containing enemy elements to purge itself thereof with the assistance of the custodian, who may permit the British shareholders to buy out enemy shareholders, depositing the price so paid with the custodian. The ordinance follows the English Act closely with such modifications as local circumstances require. It enables Government to wind up hostile businesses much on the lines of the Indian Companies and Insolvency Acts, the distribution of assets so realized being subject to special rules. The liquidator has power to give a good title to purchasers of the goodwill of hostile businesses and to the immovable property held by them. The new procedure represents a considerable advance from that previously adopted in that the initiative for liquidation comes from the liquidator and is not left nominally with the firm itself. It also enables hostile businesses dealt with to be completely extinguished, thereby preventing any chance of their recovering from a state of suspended animation and resuming business after the conclusion of peace. An additional provision contained in the ordinance relates to the property of hostile persons or associations not engaged in trade. The Hostile Foreigners Trading Order contained no provisions for dealing with non-trading persons or associations.

In considering the total volume of trade handled by hostile foreigners one is struck by the fact that it represented before the war only a comparatively **small proportion of the total trade** between India and Germany and Austria. The dye business was done almost entirely through Germans but apart from this particular line the bulk of imports from and exports to Germany and Austria passed through British or neutral firms in India. The ultra-patriot cries out for a complete boycott of goods from these countries after the war. This policy will hardly appeal to thinking men. It is almost on a par with the brilliant suggestion put forward in a reputable Anglo-Indian newspaper that it should be made an offence to be in possession of German-made goods. Any such goods found were to be sold immediately on the conviction of the owner. No suggestions were made as to the treatment of the purchaser. No, the victorious allies will not serve any good purpose by attempting to annihilate the productive power of Germany and Austria. The Teutonic Empires, once the cancerous growth, which has vitiated their whole being,

has been excised, will still constitute a body eminently useful for the economic service of the world at large. But this body must be confined within limits, and the moral to which a consideration of this question of hostile trade in India points, is that the Teutonic body can be made a thoroughly useful servant, even though its activities are confined to its own territories. In other words India can do just as big a trade with Germany as before without a single German being allowed to reside in India. In every branch of trade with Germany and Austria except the dye-business, the bulk of the produce is handled by British and neutral concerns. When the war is at an end, trade must be resumed with the enemy Powers, but there is no reason why any German or Austrian should ever again reside in this country for his profit.

GOVERNMENT CONTROL OF WHEAT EXPORTS.

The circumstances which led the Government of India to undertake the control and marketing of the Indian wheat exports were peculiar. There was a very large wheat crop in India in the season 1914-15, and the surplus available for export was estimated at two million tons. In ordinary circumstances, therefore, India might have looked forward to a brisk season, with the internal prices at reasonable rates. But the economic disturbances set up by the war and the operations of speculators produced a complete bouleversement. The supply of ready wheat in India was cornered and the prices forced up to famine level. At the same time there were large operations in the new crop. The great wheat-eating provinces in India are the Punjab and the United Provinces. In parts of the Punjab wheat was forced up to six seers a rupee, which is a rate which inflicts severe distress on the consuming class, and the position was such that action was imperative. There had been widespread agrarian trouble in the Western Punjab, which whilst inflamed by rumours of the war nevertheless was largely caused by the high prices, and experienced officers were convinced that if the progressive rise in values was not checked there would be extensive rioting and looting of grain shops in the Punjab and the North-West generally. Government were pressed to take two courses—to prohibit the export of wheat until prices came down to the level of nine seers per rupee and on the other hand to let the market take its course, on the supposition that the high prices realised by the growers would compensate the consumers for the famine prices which they had to pay for their food. The unofficial view of the question will be found reflected in an interesting debate in the Imperial Legislative Council (*q.v.* Work of the Legislative Council). As a preliminary step the export of wheat from December to March was limited to 100,000 tons (92,000 tons only were shipped) and in March all exports on private account were prohibited for a year. These were temporary measures: Government took a quite different and even more heroic course—they took the whole of the export trade under their own control.

The Official Policy.—The scheme adopted by Government involved the total prohibition of the export of wheat on private account with the exception of wheat purchased in fulfilment of actual sale contracts prior to the date of Government's announcement of their policy. The firms ordinarily engaged in the export of wheat from India were employed as Government agents and were remunerated by a commission of 3*d.* per quarter for buying in India and 3*d.* per quarter for selling in England *plus* a fee of ½ per cent. for guarantecin the home buyer. The supervision of the scheme in India was in the hands of the Wheat Commissioner, subject to the orders of the Government of India: the Indian Wheat Committee, of which the Chairman was Lord Lucas, was appointed to supervise operations in England. Freight was chartered in England under the direction of the Committee. Any profit, after payment of all charges arising out of the differences between the sale of the wheat at its natural price in England and its purchase at the officially regulated price in India was to form part of the revenues of the Government of India, while the British Treasury guaranteed the Government of India against any loss.

Results of the Scheme.—The Indian Government's scheme was immediately successful in reducing Indian prices to a safe level. It also succeeded in placing the undoubted Indian surplus of wheat at the disposal of the population of the United Kingdom during the inter-harvest months when the United Kingdom was most in need of supplies from India. Wheat prices in England fell from 69 shillings per quarter c.i.f. in April to 49*s.* 9*d.* in the middle of June, this being the lowest price received for the Indian Government's shipments. Prices rose again in July and August but not to their previous level, the average price being 55 to 56 shillings. To this fall in Home prices the Indian Government's shipments undoubtedly contributed.

Whilst accomplishing these ends the scheme secured a good profit to the cultivator, which is estimated at twenty-five per cent. above normal. The Government price never worked out at less than three rupees eight annas per maund at Lyallpur, the great wheat market in the Punjab, and in normal times the cultivator is satisfied if he sells his crop at three rupees.

The one point in which the Government scheme is open to serious criticism is the method adopted for **financing the wheat firms in India.** About the end of May the Secretary of State decided that the Government of India should place funds from their own resources at the disposal of the Agent firms, thus avoiding transactions between England and India in connexion with purchases to be made and paid for in India.

Special arrangements were made in respect of sums provided by the agent firms for the purchase of wheat on Government account before the publication of the Government's decision. The firms had the option of taking repayment either in India or (at the rate of 1*s.* 4*d.* the rupee) in England. In the latter case payment was made at the date on which a demand bill reached England.

This decision was very hotly criticised. It was argued that it was no real economy: also that it was responsible for a break in exchange and a large demand for sterling bills on London, or Reverse Councils as they are now called Further, it temporarily destroyed the means of livelihood of certain brokers who depend on this business. But inasmuch as the British Treasury had guaranteed the Government of India against loss, whilst agreeing that India should take any profit, the decision of the Treasury was final.

The payments made to the agent firms in India amounted to Rs; 6,98,63,283-11-5, of which Rs. 2,65,65,129 represents payments in sterling made by the Secretary of State. To this must be added the cost of the Wheat Commissioner's establishment, *viz.*, Rs. 77,155-14-10 from the 1st April 1915 down to the 30th April 1916. The **estimated profit** is about £130,000. This figure is a good deal less than was anticipated at the commencement of the scheme—ambitious people saw a profit of a million or two in it. The surplus available for export proved to be much smaller than was thought; the official estimate of the yield of the 1915 crop was 10,293,000 tons which should have left an exportable surplus of at least 2,000,000 tons. The Home Committee also held on too long, and when the unexpected break in prices occurred they saw their prospective profits disappear. Then Government carried their own insurance: two of the wheat ships were sunk, one by a submarine, whilst another was wrecked when approaching the Mersey.

Private export resumed.—By the end of April 1916, the situation had materially altered. The new season's crop in India was beginning to come forward and prices were very much lower than in the preceding year; the demand from the United Kingdom also was less urgent. The Government of India therefore decided to abandon the scheme of Government purchase and allowed private export to be resumed from the 1st May 1916, retaining only control over the total quantity exported by means of a system of allotments to the exporting firms. Purchases by the firms were at first on a very small scale since the high cost of freight left very little margin of profit between Indian and Home prices; but in the period from August to October helped by the favourable prospects of the monsoon and by steadily rising prices for wheat in England, much larger purchases were made. By the end of October it was estimated that 550,000 tons had been bought for export, nearly all at Karachi.

The Wheat Commission.—During October unfavourable reports began to be received of the prospects of the American and Canadian crops, which had been severely damaged by rust. Prospects of the harvest in England also were poor and the price of wheat rose to 80 shillings per quarter. A Royal Wheat Commission was appointed in England to regulate supplies and prices of wheat in the United Kingdom and it was soon announced that the Commission would resume Government purchases in India. The following table shows the exports of wheat from Karachi, Bombay, and Calcutta in recent years:—

	Pre-War Average.	1915–16.	1916–17.
	Tons.	Tons.	Tons.
Karachi	1,005,800	526,200	679,200
Bombay	164,900	78,600	46,600
Calcutta	137,300	48,100	7,900

EXPORT OF TANNED HIDES.

The production of rough-tanned cow hides known as East India Kips has for a long time been an important trade in Madras and Bombay. These kips are exported to the United Kingdom and after further treatment by curriers are used principally for the upper leather of boots. The demand for upper leather in England has been phenomenal since the commencement of the war on account of the very large contracts for boots for the British Army and our Allies undertaken by British manufacturers under the direction of the Royal Army Clothing Department. In order to regulate the prices payable for the tanned hides and also the increase the supply, arrangements were made in August 1916 by which the Indian Government undertook the purchase in India of all East India Kips suitable for Army work. These are being bought in Madras and Bombay by the Indian Government and shipped to the War Office. Prices for the various grades and tannages have been fixed. In Madras purchases are made by Government from the 14 principal exporting firms previously engaged in this trade, allotments being made to the firms in proportion to their previous business. Freight is provided by Government. In Bombay an Agent has been appointed to purchase from the tanners direct and ship to the War Office. The Government of India have placed the control of the scheme in India, under their direction, in the hands of the Wheat Commissioner who is assisted by Mr. J. Wright Henderson, of Messrs. Wood Malvenan & Company of Glasgow, representing the War Office.

Recent reports of hides and skins are shown in the following table:—

Averages of 5 years 1909-10 to 1913-14.	..	.. 14,61,19,000
Year 1915-16	..	.. 15,43,34,000
,, 1916-17	..	.. 23,84,84,000

The export of **raw hides** is another subject still in a state of flux. Germany's place in this trade since the war has largely been taken by the U. S. A. and Italy. From 1st April 1915 exports of weights required for Army leather were restricted to the normal in the case of the U. S. A., "the normal" being very liberally interpreted to allow for normal expansion. At the end of 1916, however, the continued rise in raw hide prices, the difficulty of obtaining supplies for the Madras and Bombay tanners and the increasing demand from the U. K. led the Government of India to announce that after 31st December 1916 (allotments having been given quarterly) no further allotments would be given for export to countries other than the United Kingdom or allied countries of raw hides of weights required for Army work, *viz.*, 6 to 18lbs. arsenicated, and 9 to 24 lbs. dry salted.

THE WOOL TRADE.

The demand for export of Tibetan Wool mainly to the United States of America, caused a great rise in price of this class of wool during the last quarter of 1915 and rendered it difficult for the Woollen Mills in the north of India which were engaged on important Government contracts, to obtain sufficient supplies. The embargo on export of Tibetan wool which had been removed in September 1915, was therefore re-imposed in January, 1916, and arrangements were made for the direct purchase by Government, for supply to the Northern Indian Woollen Mills, of all Tibetan wool entering India through the State of Sikkim. The Defence of India (Wool Purchase) Rules published in the *Gazette of India* on the 16th February, 1916 prohibited the purchase of such wool except under license from Government, the control of licenses and purchases being placed in the hands of the Wheat Commissioner for India.

In 1916-17 the Exports of raw wool were 48 million lbs. or 17 million lbs. less than in the preceding year and nearly 6½ million lbs. less than the pre-war average.

Madras Wool (Black and Grey).—The export from India of this wool, which is largely used in the manufacture of Army Blankets by the Bangalore and Bombay Woollen Mills, has been prohibited: further, in order to prevent the wool being railed from Madras to areas further north, where it could be mixed with Dekkani and similar wools and so evade the export restriction, transport by rail from stations within the Madras Presidency has been regulated by a system of licenses controlled by District Collectors.

MUNITIONS BOARDS.

In view of the shortage of ocean freight, the demands of the expeditionary forces to Egypt, East Africa and Mesopotamia and the concentration of the British industries on the production of war materials a determined effort was made in the course of the year to develop Indian sources of supply. For this purpose a Munitions Board was established under the direction of Sir Thomas Holland, formerly Director of the Geological Survey of India and subsequently President of the Indian Industries Commission (q.v.). The work of this Board is necessarily largely confidential but in a speech in the Imperial Legislative Council on September 5th His Excellency the Viceroy gave a detailed account of some of its activities. In the course of this he said: Although certain scientific and technical services had been organised before the war and individual experts had been employed by local Governments for the purpose of facilitating the development of our natural resources as well as industrial enterprises the Government of India have for some time been conscious of the fact that time efforts were more sporadic than systematic. They were, nevertheless, not without value as experiments necessary to establish the data required to formulate a more comprehensive policy. The marked success which has followed the organisation of research and demonstration work in scientific agriculture and the assistance which has been given to the mineral industries by the Geological Survey are striking examples that encourage a bolder policy on similar lines for the benefit of other, and especially the manufacturing industries. With the object of recent attempts to assist industrial development and for the purpose of formulating schemes for a more systematic policy, my predecessor appointed a Commission, which has commenced its survey and expects to complete its investigations during this next cold weather. Meanwhile, special conditions arising directly from the war—the shortage of ocean transport facilities, the cutting off of supplies of many manufactured articles and the necessity of economising man-power in the United Kingdom—have induced my Government to anticipate the findings of the Industrial Commission, organising at once so far as is possible under present circumstances, the resources of the country with a view of making India more self-contained and less dependent on the other world for supplies of manufactured goods.

The Munitions Board was founded five months ago with this main object in view and its organisation has grown so rapidly along the lines originally planned that its activities now exceed in bulk those of most Government departments. Of the **two main objects** kept in view when this organisation was planned, the supply of essential stores for the armies in the field has necessarily been given precedence. To the ultimate object of developing established and of inaugurating new industries in India the primary object of the Munitions Board was immediately essential while the

accessory object was regarded as more distantly important. But experience has demonstrated the inventive fertility of necessity and success beyond expectation has already followed attempts to manufacture in the country articles that formerly could be obtained only from abroad. In carrying out its primary object the Munitions Board has gathered together the hitherto isolated fragments of other purchasing departments and has welded them into a single organised machine for the purpose of regulating contracts and amalgamating demands, thereby buying on a larger scale and preventing the competitive buying between various Government agencies, which previously caused those disturbances of local markets that were neither good for Government nor for the commercial community. The early activities of the Board were necessarily confined to a regrouping of the centrally controlled official machinery in co-operation with the local Governments. However, outputs have now been instituted in every province and the framework having thus been established, the development and consolidation of the whole body should proceed on sound lines.

In revising the indents made by Government officials on the Stores Department of the India Office and in controlling the applications made by private importers for permission to import articles on the English list of prohibited exports, it has been found practicable to curtail numerous demands that were formerly made in ignorance of Indian resources and thus to bring the would-be importer into touch with the local manufacturer. The **centralisation of information** in this way has revealed the fact that numerous isolated demands, each made on a scale too small to tempt local enterprise, often form in the aggregate markets of a size sufficient to justify the organisation of new industries. To detect the existence of these and to assist private enterprise a special branch of the Board is devoted to the collection and distribution of industrial intelligence. In extension of work of this nature arrangements are being made for the distribution to colleges of research problems having a direct industrial value, the distribution of the problems being controlled so as to prevent unnecessary overlapping and duplication of work. It would take too long to recite all the activities of the Board, but I will give you one example to show the way in which our present war necessity is being turned to account for industrial development of a kind likely to become permanent. The simultaneous exports of raw hides and raw tanning materials has often suggested to economists the desirability of developing the tanning industry in India. Hitherto, enterprises in this direction have been attended with but limited success. In order, however, to meet the War Office demand leather tanners in India have now been given orders on a scale that has encouraged them to reform their methods and by having to work regularly to a rigid standard of high quality, striking improvement in their work has already taken place. In order more fully to turn to account the various natural-tan stuffs of India, the Munitions Board, with the generous consent of a group of Central Indian States, has taken over the tannery at Majhar to test new tan stuffs, new combinations of known materials, new processes and the manufacture of concentrated tan extracts. The experimental work at this tannery is controlled by a committee composed of members of the tanning industries and expert leather chemists. Those results, which on an experimental scale, appear to be successful, are being tested on a commercial scale at the Allahabad Tannery recently purchased for the purpose. The results as they become established will be published for the benefit of tanners in other parts of India, any of whom will be welcome to inspect the processes in actual operation at Allahabad.

With the Forest Department the Munitions Board has organised the collection of those materials that are shown by the experimental work to be promising tan stuffs and has arranged with the railway companies for their distribution at uniform and low rates of freight. A certain number of students are already being entertained as apprentices and it is hoped later on to develop this side of the work by the formation at Allahabad of an institute in which the scientific aspects of tanning will be taught in conjunction with practical work on a commercial sale in the tannery itself. It is in directions like this that the work of the Munitions Board will grow until at the end of the war its machinery should be ready to be utilised with practical effect in carrying out the recommendations of the Industrial Commission. Such, in brief summary, is the work of the Munitions Board, vital as regards our present necessities and pregnant with promise for the future.

TRADE IN 1917.

In the section on the Trade of India the detailed figures are dealt with for the official year, *viz.*, 1st April 1916 to 31st March 1917. We have not available detailed information with regard to the later period, but the following tables give the imports and exports for the six months from the 1st April 1917 to the 30th September, with comparisons with the two previous years.

Imports:—Value of the Merchandise Imported from each Principal Country by Sea into BRITISH INDIA during the Six Months, 1st April to 30th September 1915, 1916 and 1917.

COUNTRIES.	SIX MONTHS, 1ST APRIL TO 30TH SEPTEMBER		
	1915.	1916.	1917.
	Rs.	Rs.	Rs.
BRITISH EMPIRE—			
United Kingdom	41,10,53,376	48,15,66,178	40,34,55,982
Aden and Dependencies	24,78,458	36,95,498	33,13,692
Ceylon	40,38,703	53,31,976	93,19,448
Straits Settlements (including Labuan)	1,97,67,258	1,92,36,978	2,30,61,910
Hongkong	61,78,140	54,43,651	67,08,446
Egypt	36,73,770	32,96,894	38,27,987
Mauritius and Dependencies (including Seychelles)	1,25,54,743	32,26,899	30,11,256
Zanzibar and Pemba	13,55,795	15,40,772	10,81,019
East African Protectorate	6,40,919	9,57,994	22,16,984
Canada	28,148	32,197	3,30,284
Australia	24,45,184	47,69,877	36,66,557
Other British Possessions	20,53,577	23,88,342	31,44,478
Total British Empire	46,62,68,071	53,14,86,756	46,31,38,043
FOREIGN COUNTRIES—			
Russia	1,10,427	5,85,000	2,38,557
Sweden	40,47,058	43,25,394	17,71,014
Norway	23,96,348	34,83,000	26,56,319
Germany	27,02,878	7,60,485	1,06,415
Holland	61,13,154	55,35,798	24,61,055
Belgium	9,64,905	3,07,060	45,873
France	94,81,888	1,11,69,771	1,03,55,557
Spain	25,08,020	19,94,227	8,31,978
Switzerland	33,99,910	37,10,900	23,97,247
Italy	90,48,097	1,08,11,278	1,27,03,118
Austria Hungary	35,266	3,472	5,55,982
Turkey, Asiatic	3,97,574	8,72,458	7,96,307
Arabia	18,43,824	13,24,777	7,89,855
Persia	25,64,606	23,59,999	40,69,590
Sumatra	2,55,198	1,89,118	5,03,626
Java	5,80,38,530	5,22,05,549	4,18,94,765
Borneo (Dutch)	51,34,210	38,26,053	12,36,062
Siam	17,11,483	17,49,391	28,63,305
China (exclusive of Hongkong and Macao)	92,56,430	72,23,257	1,04,65,050
Japan	3,43,84,891	5,48,96,386	7,18,61,771
Portuguese East Africa	3,89,318	2,04,250	4,98,357
Italian East Africa	8,98,081	7,95,921	8,69,565
United States of America	3,52,40,052	5,05,91,075	5,33,65,996
Other Foreign Countries	8,46,060	29,36,292	16,79,448
Total Foreign Countries	19,17,68,208	22,18,60,911	22,50,16,812
GRAND TOTAL	65,80,36,279	75,33,47,667	68,81,54,855

Exports:—Value of Indian Merchandise Exported to each Principal Foreign Country from BRITISH INDIA during the Six Months, 1st April to 30th September in the years 1915, 1916 and 1917.

COUNTRIES.	SIX MONTHS, 1ST APRIL TO 30TH SEPTEMBER		
	1915.	1916.	1917.
	Rs.	Rs.	Rs.
BRITISH EMPIRE—			
United Kingdom	36,73,62,795	36,23,33,141	26,55,81,421
Gibraltar	18,41,233	44,455	44,375
Aden and Dependencies	64,44,091	74,54,256	40,06,648
Ceylon	4,01,02,409	4,67,60,611	4,52,25,468
Straits Settlements (including Labuan)	2,26,80,924	2,91,14,325	2,86,95,282
Hongkong	2,20,04,330	2,16,32,906	2,16,46,270
Egypt	1,06,49,315	87,90,634	14,69,41,116
Cape Colony	26,03,308	23,32,770	37,79,965
Natal	58,72,718	66,27,856	79,14,965
Mauritius and Dependencies (including Seychelles)	61,94,761	90,99,425	53,19,226
Zanzibar and Pemba	16,93,505	29,19,589	18,48,228
East African Protectorate	22,46,345	28,60,310	30,38,734
Canada	69,61,796	66,79,670	1,13,30,396
British West India Islands	8,47,282	8,39,855	10,06,825
Australia (including New Zealand)	2,62,93,026	2,52,47,869	2,95,27,706
Other British Possessions	43,00,095	65,78,147	1,20,49,124
Total British Empire	52,75,97,933	53,93,15,819	58,79,55,745
FOREIGN COUNTRIES—			
Russia	1,90,78,905	3,40,02,747	63,14,999
Sweden	23,60,380	6,78,649	....
Norway	6,94,293	10,62,878	17,83,227
Germany	....	....	....
Holland	16,50,366	6,81,060	7,73,000
Belgium	23,10,226	....	....
France	4,45,80,271	6,22,00,132	5,15,35,481
Spain	1,06,17,514	1,00,97,821	19,36,902
Switzerland	16,47,494	2,90,366	27,03,541
Italy	3,29,70,093	3,86,19,123	2,75,00,656
Austria Hungary	....	....	....
Turkey, European	599	....	....
Turkey, Asiatic	24,02,492	59,21,621	81,21,192
Arabia	45,88,700	58,97,291	58,14,673
Persia	70,42,017	65,44,544	1,08,85,840
Sumatra	12,27,069	27,44,388	45,24,944
Borneo and Java	70,34,232	1,43,49,357	146,95,871
Siam	42,36,340	53,94,886	,73,69,571
Indo-China, etc.	36,37,161	72,22,506	62,43,981
China (exclusive of Hongkong and Macao)	2,29,36,561	2,80,70,908	2,70,70,736
Japan	8,61,51,825	13,84,24,026	16,39,09,857
Portuguese East Africa	16,95,632	15,86,760	31,06,787
Italian East Africa	5,77,989	3,57,068	6,12,935
Other East African Ports	8,94,581	10,07,200	2,79,419
United States of America	9,37,36,989	14,57,52,255	12,01,26,624
West Indies	79,30,483	1,44,37,526	53,31,177
South America	2,64,99,584	2,83,71,522	80,43,258
Oceania	18,12,761	29,43,332	8,08,242
Other Foreign Countries	22,06,389	35,61,980	19,61,053
Total Foreign Countries	39,05,20,946	56,02,19,946	48,14,53,966
GRAND TOTAL	*a* 91,81,18,879	*a*1,09,95,35,765	*b*1,06,94,09,711

a Include the value of wheat and tanned cowhides exported on Government account.
b Include the value of wheat and tanned cowhides and other articles of national importance exported on Government account.

RELIEF FUNDS.

On the initiative of His Excellency the Viceroy a large sum of money has been raised in India for the relief of distress caused by the war. A Central Committee was formed, over which the Viceroy presided and which included the Governor of Bengal, the Governor of Madras, the Governor of Bombay and the Commander-in-Chief, the members of H. E. the Viceroy Executive Council, the heads of other Local Governments and Administrations and the following Ruling Chiefs:—Their Highnesses the Maharaja of Bikaner, the Begum of Bhopal, the Maharaja of Gwalior, the Nizam of Hyderabad, the Maharaja of Indore, the Maharaja of Jaipur, the Maharaja Regent of Jodhpur, the Maharaja of Kashmir, the Maharao of Kotah, the Maharaja of Mysore, the Maharaja of Patiala, the Maharaja of Rewa, and the Maharana of Udaipur

Under its control an executive committee was formed and local branches were constituted. The treasurer of the Fund was at first the late Sir A. Kerr who was succeeded by Mr. Henry (General Manager of the Alliance Bank of Simla) and the Joint Secretaries are Mr. F. W. Johnston and Major John Mackenzie.

Among the provincial offshoots of this fund is the **Women's Branch** of the Bombay Presidency Fund, which was started by Lady Willingdon, with the object of collecting comforts for the troops and of making up quantities of suitable garments.

Pensions—The balance of the money at the disposal of the Central Fund will be devoted eventually to the third, and ultimately the most important, object of the Fund, namely, the grant of assistance to the widows and orphans of those who are killed or die in service, to whom must logically be added the officers and soldiers incapacitated for further service. The amount which might be expended upon this object is almost unlimited, and the Committee in a recent communique to the Press state they have consequently endeavoured from the first to accumulate as large a sum as possible for expenditure at the end of the war, while affording such intermediate assistance as may be necessary. Some idea of the calls which may be anticipated upon the Fund at the close of the war may be gathered from the fact that even if the war had ended, by March 1916, the casualties continuing at the same rate as hitherto, it was estimated that of British officers of the Indian Army and of the Indian Army Reserve there will, by that time, have been 540 killed and 800 wounded; of Indian officers 800 killed and 750 wounded, and of Indian non-commissioned officers and men 9,000 killed and 25,000 wounded. It must, of course, be remembered that not more than 25 per cent. of the wounded in each class are likely to be so severely wounded as to be invalided out of the service. In the majority of case the wounds will be relatively slight, and the men will remain on the active list. Even allowing for this fact, however, there will probably be some 200 British officers, nearly as many Indian officers, and 6,000 Indian non-commissioned officers and men who are incapacitated by wounds for further service, many of whom will need assistance from the Fund. With the war lasting longer, or should the ratio of casualties become still higher, the number of claimants for assistance from the Fund will be much greater than at present anticipated. In addition to the classes mentioned above, there are also the widows and dependents of men serving on the Departmental Unattached Lists, of the Civilian European and Anglo-Indian staff belonging to the Military Accounts, Postal and Telegraph Departments, and of Sub-Assistant Surgeons, all of whom may need help.

All the above-mentioned classes will, of course, be eligible for pensions from the State; and the wound and injury pensions, as well as the family pensions, admissible to all ranks of the Indian Army and their families have recently been materially enhanced. Nevertheless it is impossible for any pensionary scheme, however liberally framed, to meet in full the varying degrees of need which will arise; and it is with the object of **supplementing the efforts of Government** in this direction that the Central Committee have under their consideration various schemes for the grant of assistance to all these classes at the close of the war. A rough estimate of the probable cost of these measures, based upon the optimistic hypothesis that the war might come to an end in the spring of 1916 and that the number of casualties will remain fairly constant, showed that even then **at least Rs. 85 lakhs** would be required, if adequate relief is to be granted.

St. John Ambulance Association.

H. E. the Viceroy, President of the Indian Council of the Association, announced on June 24, 1916, a change in the constitution of the Red Cross Department of this Association He said: "The Indian Council of the St. John Ambulance Association has decided to affiliate itself to the Joint War Committee in England of St. John's and the Red Cross under the title of The Indian Branch of the Joint War Committee of the Order of St. John of Jerusalem and of the British Red Cross Society.' I feel sure that you will approve of this step which, while it leaves the civil side of the St John Ambulance Association untouched, is calculated to promote efficiency as regards Red Cross work and to ensure prompt supplies of comforts to the sick and wounded, while it eliminates all possibilities of overlapping and friction. As an earnest of this agreement I may say the Joint War Committee in England has placed the sum of £30,000 to my credit for the furtherance of the work of the new Branch."

The new organisation took effect on the 2nd August, 1916, and reports on the Red Cross work in India now issue under the direct auspices of that body. The Indian Branch of the St. John Ambulance Association retains its present constitution as far as its civil or pre-war activities are concerned, its Red Cross work being affiliated to that of the separate Joint War Committee. Their Excellencies the Viceroy and Lady Chelmsford

and the Commander-in-Chief are the President, Lady President and Vice-President, respectively, of the new organisation. The Joint Honorary Secretaries are the Rev. James Black and Major H. Ross, I.M.S.

The **War Fund** has received generous support from the European and Indian public generally. Besides substantial donations from Princes and Nobles and other persons of wealth, the steady flow of subscriptions from officials of all grades has been a very gratifying feature of the Red Cross movement, while the help received from and through the leading and other ladies throughout the land must for ever stand out as a remarkable testimony to our women, Indian and European. In addition to contributions in kind the War Fund has received Rs. 14,29,132-0-11 (over £95,000 sterling), of which it still had at the end of June a cash balance in hand of Rs. 4,09 835-2-0. His Highness Maharaja Scindia of Gwalior, who is a Donat of the Order of St. John of Jerusalem in England, in addition to requesting that one-third of the total collection for the War in his State should be given to the St. John Ambulance War Fund, has himself given as many as five hundred original Indian and British Ten-Bed Units to the Indian Council, representing a cash value of Rs. 3,00,000, or £16,600 sterling, as well as a grant in money of Rs. 75,000. His Highness the Maharaja Holkar has made a handsome donation of Rs. 1,20,000 (£8,000 sterling), and the Sheikh of Koweit one of Rs. 50,000. The Bettiah State has also recently made a noble contribution to the War Fund of Rs. 1,00,000. Other very generous donations are:—The Raja Bahadur of Mymensingh, Rs 60,000, Sir Rameshwar Singh, Maharaja Bahadur of Darbhanga, Rs. 57,500; Her Highness the Begum of Bhopal, Rs. 19,000. Her Excellency Lady Carmichael's Bengal Women's Fund (towards special purchases for certain hospitals) Rs. 10,000 and Raja Jyoti Prasad Singh Dev of Panchet Rs. 10,000.

The supply of **Motor Ambulance and Cars** for the sick and wounded as well as for officers and men approaching convalescence continues to be one of the principal items of expenditure. The demand upon the Army for Ambulances and Cars of various designs for above service has with the advance of time and expansion of Military operations, become increasingly pressing and it is a source of much gratification to the Indian Council that they have been enabled by the great generosity of certain individuals and of the public generally to come to the aid of our brave soldiers in this matter in a very substantial way. The cost of the present pattern of Ambulance as approved by the Military authorities is approximately Rs. 10,000. In addition to the ordinary Ambulance fitted for lying-down cases supplies have included Motor Buses of a special design for the rapid transport of less helpless cases between Ship, Train, and Hospitals and Motor Cars of a lighter build for use locally to take the men out for an occasional airing—a fruitful aid to speedy convalescence.

Mesopotamia—The special needs of Mesopotamia are the principal concern of the Association. An advanced Depot was opened at Basra in March 1916, and another at Baghdad in March, 1917. Not only have the hospitals in Mesopotamia increased in number, but Convalescent Homes for officers have been opened at Amara and Basra, each to accommodate about 50 To the fitting up of these the Indian Council have contributed liberally the and will continue to do so as required.

Pay of the Indian Soldiers.

On January 1, 1917, important concessions to the Indian soldier were announced. In addition to receiving free rations (equivalent, in the case of a sepoy, to about Rs. 3-8 per month) Indian officers and non-commissioned officers are to benefit by largely increased pay. The advantages thus secured are shown below, where the former rates per month and the new rates are contrasted:

——	Former pay.	Increased pay.
	Rs.	Rs.
Subadar-Major and Risaldar Major	150	180
Subadar, Risaldar and Ressaldar	100	120
Jamadar	50	60
Havildar and Dafadar ..	18	20
Naik and Lance Dafadar ..	16	17

The increase in ordinary pensions is also very substantial. It has to be noted that formerly a sepoy or sowar could not retire on pension on the completion of 15 years' service unless he were invalided, when he received Rs. 3 per month, whereas in future he may retire in the ordinary way after 15 years on Rs. 5 per month. Under the old system, again, the sowar or sepoy received a pension of Rs. 4 per month on the completion of 18 years' service, while the new rate will be Rs. 6. The increases in the case of other ranks are shown below:

——	Service. Years.	Former rates. Rs.	New rates. Rs.
Lance-Dafadar and Naik	18	5	7
Dafadar and Havildar ..	18	7	9
	21	9	11
Jamadar	20	16	24
	24	20	30
Risaldar-Major, Subadar-Major.	21	30	40
	24	35	45
Risaldar, Ressaldar and Subadar.	28	40	55

The officers in the last category formerly had to serve 32 years to reach the maximum pension which was then Rs. 50 per month.

In addition to the above, there has been a pronounced enhancement in the special pensions granted to those who are not eligible for "ordinary" pensions, and who may be discharged on the recommendation of a medical board owing to physical or mental weakness due to causes beyond their own control.

INDIAN FRONTIER ACTIVITIES.

In the 1917 edition of the Indian Year Book, a summary was given of the despatch by the Commander-in Chief, Sir Beauchamp Duff, of the military operations carried out on the Indian frontiers up to the 10th March 1916. In a later despatch carrying the narrative to 31st March 1917, the Commander-in-Chief, Sir Charles Monro, particularised the following operations.

Aden.—Our forces have been in occupation of the Shaikh Othman-Imad line covering Aden, and facing the Turkish forces in Lahej and south-east of that place. Throughout the year our troops have been in constant contact with the enemy, engaging in numerous outpost and patrol skirmishes. The Turks made only one attempt to assume the offensive. On the 16th March, 1916, they attacked Imad in force. The enemy was b aten off without difficulty and withdrew, followed up by the garrison and by the movable column from Shaikh Othman. An attack was made on the Turkish posts at Jabir and Mahat on the 7th December, 1916, in which the enemy casualties were estimated at 200. The action is reported to have had a demoralising effect on the Turkish Arab auxiliaries, and to have produced the intended result, *viz.*, preventing the withdrawal towards the Yemen of Turkish troops from Lahej. In maintaining the active defence of Aden during this period, the assistance and co-operation of the Royal Navy which has been readily afforded at all times, has been invaluable.

South Persia.—Owing to disturbances in Southern Persia and the consequent necessity for raising a Persian force under British officers to enable the Persian Government to restore and maintain order, a mission under Brigadier-General Sir Percy Skyes, K.C.I.E. C.M.G., was despatched from India. With a military escort of all arms amounting to about 500 men, Sir P. Sykes marched from Bandar Abbas, *via* Kerman and Yezd, to Isfahan, where he joined hands with the Russians. Subsequently, the mission moved south to Shiraz, where it now is. The Persian force is in process of formation. No opposition was met with on the march. In September, 1916, a mixed force was despatched from Isfahan to bring in a large convoy which was held up by raiders on the Lynch Road, some 50 miles from Isfahan. On the return journey the convoy was attacked near Kaleh-i-Shahi. The raiders were dispersed with considerable loss, and the convoy reached Isfahan in safety. After the arrival of the mission in Shiraz, a rising broke out in Kazerun and neighbourhood on the 17th December. A detachment of all arms was sent out from Shiraz, but, meeting with strong resistance at the Pir-i-Zan Pass, it withdrew to Shiraz. A small force operating in the district of Sirjan, drove a force of Baharius and rebels from the town of Saidabad on the 28th September, 1916

South-east Persia.—In conjunction with the Russians a small force was maintained in Eastern Persia to ensure the tranquillity of this region and frustrate the activity of German agents. *Raids on the lines of communication* of the force were made by certain tribes of Persian Baluchistan notably the Damanis of Sarhad. In order to prevent these and to control the Damanis, Brigadier-General R. E. Dyer, Commanding in Eastern Persia, moved a part of his force to Khwash in May 1916. In July the hostile attitude of the Damanis necessitated punitive measure. The Damanis are divided into two main sections, the Yarmahomedzais and the Gamshadzais. Brigadier-General Dyer determined to move to Gusht in order to intervene between these two sections and to deal with each in detail. Operations in the vicinity of Gusht from the 12th July to the 28th July resulted in the capture of the bulk of the Yarmahomedzai flocks and herds, the infliction of considerable loss and the separation of the two Damani sections. During the period several small actions were fought under trying conditions of climate and terrain, the chief engagement being one at Kalag near Gusht on the 21st July. During August, General Dyer traversed without opposition a large part of the Gamshadzai country, returning to Khwash on the 24th August. As a result of the above operations, agreements were arrived at with the chiefs of the Damanis, by which they promised to pay certain fines and to refrain from future hostility. The fines imposed have now been paid in full, and the settlement has allowed of a portion of the Sistan force being withdrawn to Quetta. The troops maintaining a cordon in Sistan were engaged with hostile bodies on three occasions. At Lirudik on the 13th April, 1916, a force of 70 men of the Punjabis with a part of levies, inflicted considerable loss on a lashkar estimated at 700 men. At Kalmas, on the 26th September, a party of 23 men of the Light Cavalry and 36 levies, defeated a party of gun-runners, capturing a large number of rifles, ammunition and camels. Near Chorab, on the 24th March, 1917, a party consisting of 16 men of the Light Cavalry and one British officer and 25 men of the Punjabis attacked a gun-runner's caravan. The whole of the transport of 20 camels as well as 447 rifles and some 23,600 rounds of ammunition were captured.

Mekran Mission.—In view of the disturbed state of the Mekran border due in a great measure to the intrigue of German agents, a political mission under Major Keyes of the Political Department, traversed this region with a regular escort of one platoon Gurkha Rifles, one company Baluch Light Infantry, and one section Indian Field Ambulance. This mission left Gwadur in April 1916, traversed Persian Baluchistan as far north as Khwash and returned to Chahabar, arriving on the 2nd February, 1917.

Operations in Jha'awan.—During the first half of 1916 considerable unrest existed amongst certain Jhalawan tribes of the Kalat State who had organised roving bands of marauders to terrorise the country. It was decided to send an escort with Lieut.-Colonel A. B. Dew, C.S.I., C.I.E., the Political Agent, Kalat, to restore order in that region. The escort consisted of five British officers, and 250 men of the Pioneers, one section mountain Battery, one Indian officer and 29 men of the 3rd Gwalior Lancers (Imperial Service Troops), and one section Field Ambulance concentrated at Mastung Road on the 5th June and marched *via* Kalat into Jhalawan. In a series of well

designed and executed operations during June, July and August in conjunction with the tribal forces, the rebel bands were rounded up, some 45 men being killed and a number captured. Order was completely restored by the 11th August and the Kalat Column returned to Mastung Road reaching that place on the 22nd August.

North-west Frontier.—Except on the Mohmand border, where the attitude of the tribes necessitated the mobilisation of the Peshawar and a portion of the 2nd Division, and an attack on Sarwekai by the Mahsuds in March, 1917, the activity of troops on the frontier has been confined to dealing with trans-border raids. These, however, especially on the Derajat border, have been almost incessant and have entailed considerable activity on the troops guarding the frontier. During the last half of 1916, the attitude of some of the Mohmand tribes became distinctly hostile, and a number of raids were made across the border into the Peshawar area. To prevent these raids and as a punishment, a blockade was instituted along the Mohmand border, and a chain of block houses, connected by a wire fence, was constructed and manned. On the 14th November a Mohmand lashkar estimated at 6,000 concentrated near Hafiz Kor, threatening Shabkadar.

The 1st and 2nd Infantry Brigades of the 1st (Peshawar) Division under the command of Major-General Sir F. Campbell, K.C.B., D.S.O., attacked on the morning of the 15th November. The attack was carried forward into the foothills occupied by the enemy in the vicinity of Hafiz Kor, and casualties estimated at 100 killed and severely wounded were inflicted. At 4 p. m., our force withdrew unopposed. The lashkar had been completely broken up and on the 16th November, reconnaissances showed that it had completely disappeared, the tribesmen having dispersed to their homes. The Derajat Moveable Column, under the command of Brigadier-General G. M. Baldwin, D.S.O., moved forward by the Gomal route and Khajuri Kachland relieved Sarweki on the 9th March, the enemy withdrawing to the vicinity of Barwand. The enemy encampments at Barwand were burnt and the tribesmen dispersed.

PASSPORT REGULATIONS.

The following regulations concerning passports were issued in 1915:—

1. Applications for Indian Passports must be made in the prescribed form, and submitted either direct or through the local authority—(*a*) in the case of a resident in British India, to the Local Government or Local Administration concerned; (*b*) in the case of a resident in a Native State, to the Agent to the Governor-General or Political Resident concerned.

2. The charge for an Indian Passport is Re. 1.

3. Indian Passports are granted to—(*a*) Natural-born British subjects: (*b*) wives and widows of such persons; (*c*) Persons naturalized in the United Kingdom, in the British Colonies or in India; and (*d*) Subjects of Native States in India. A married woman is deemed to be a subject of the State of which her husband is for the time being a subject.

4. Passports are granted upon the production of a declaration by the applicant in the prescribed form of application verified by a declaration made by a *Political Officer, Magistrate, Justice of the Peace, Police Officer not below the rank of Superintendent* or *Notary Public*, resident in India.

5. If the applicant for a Passport be a Naturalized British subject, the certificate of naturalization must be forwarded with the form of application to the Officer empowered to grant the Passport. It will be returned with the Passport to the applicant through the person who may have verified the declaration. Naturalized British subjects will be described as such, in the Passports, which will be issued subject to necessary qualifications.

6. Small duplicate unmounted photographs of the applicant (and wife, if to be included) must be forwarded with the application for a Passport, one of which must be certified on the back by the person verifying the declaration made in the application form.

7. Indian Passports are not available beyond two years from the date of issue. They may be renewed, *in India only*, for four further periods of two years each after which fresh Passports must be obtained. The fee for each renewal is Re. 1.

8. Passports cannot be issued or renewed on behalf of persons already abroad: such persons should be told to apply for Passports to the London Foreign Office or nearest British Mission or Consulate. Passports must not be sent out of India by post.

9. In the case of an applicant for a Passport being unable to write English a transcription in English should be placed below the applicant's vernacular signature in the form of application. In the case of an illiterate person, a thumb impression should be substituted for a signature on the form of application, which should be certified by the person verifying the declaration.

Travellers are hereby informed that *visas* and endorsements granted on passports by the Government of Bombay will, in future, be charged for as under:—

Fee for a *visa* on a foreign passport, Rs. 2.

Fee for an endorsement on a British passport, Re. 1.

THE VICTORIA CROSS.

The announcement, made at the Delhi Durbar in 1911, that in future Indians would be eligible for the Victoria Cross gave satisfaction which was increased during the War by the award of that decoration to the following:—

Sepoy Khudadad, 129th Baluchis.—On 31st October 1914, at Hollebeke, Belgium, the British officer in charge of the detachment having been wounded, and the other gun put out of action by a shell, Sepoy Khudadad, though himself wounded remained working his gun until all the other five men of the gun detachment had been killed.

Naick Darwan Sing Negi, 1-39th Garhwal Rifles.—For great gallantry on the night of the 23rd-24th November 1914 near Festubert, France, when the Regiment was engaged in retaking and clearing the enemy out of our trenches, and, although wounded in two places in the head, and also in the arm, being one of the first to push round each successive traverse, in the face of severe fire from bombs and rifles at the closest range.

Jamadar Mir Dast, 55th Coke's Rifles.—For most conspicuous bravery and great ability at Ypres on 26th April 1915, when he led his platoon with great gallantry during the attack, and afterwards collected various parties of the Regiment (when no British Officers were left) and kept them under his command until the retirement was ordered. Jamadar Mir Dast subsequently on this day displayed remarkable courage in helping to carry eight British and Indian Officers into safety, whilst exposed to very heavy fire.

Rifleman Kulbir Thapa, 2-3rd Gurkha Rifles.—For most conspicuous bravery during operations against the German trenches south of Mauquissart. When himself wounded, on the 25th September 1915, he found a badly wounded soldier of the 2nd Leicestershire Regiment behind the first line German trench, and though urged by the British soldier to save himself, he remained with him all day and night. In the early morning of the 26th September, in misty weather, he brought him out through the German wire, and, leaving him in a place of comparative safety returned and brought in two wounded Gurkhas one after the other. He then went back in broad daylight for the British soldier and brought him in also, carrying him most of the way and being at most points under the enemy's fire.

Lance-Naick Lala, 41st Dogras.—Finding a British Officer of another regiment lying close to the enemy he dragged him into a temporary shelter, which he himself had made, and in which he had already bandaged four wounded men. After bandaging his wounds he heard calls from the Adjutant of his own Regiment who was lying in the open severely wounded. The enemy were not more than one hundred yards distant, and it seemed certain death to go out in that direction, but Lance-Naik Lala insisted on going out to his Adjutant, and offered to crawl back with him on his back at once. When this was not permitted, he stripped off his own clothing to keep the wounded officer warmer and stayed with him till just before dark, when he returned to the shelter After dark he carried the first wounded officer back to the main trenches, and then, returning with a stretcher, carried back his Adjutant. He set a magnificient example of courage and devotion to his officers.

Sepoy Chatta Singh, 9th Bhopal Infantry.—For most conspicuous bravery and devotion to duty in leaving cover to assist his Commanding Officer who was lying wounded and helpless in the open. Sepoy Chatta Singh bound up the officer's wound and then dug cover for him with his entrenching tool, being exposed all the time to very heavy rifle fire. For five hours until nightfall he remained beside the wounded officer, shielding him with his own body on the exposed side. He then, under cover of darkness, went back for assistance, and brought the officer into safety.

Naick Shahamad Khan, Punjabis.—For most conspicuous bravery. He was in charge of a machine-gun section in an exposed position in front of and covering a gap in our new line within 150 yards of the enemy's entrenched position. He beat off three counter-attacks, and worked his gun single-handed after all his men, except two belt-fillers, had become casualties.

For three hours he held the gap under very heavy fire while it was being made secure. When his gun was knocked out by hostile fire he and his two belt-fillers held their ground with rifles till ordered to withdraw.

With three men sent to assist him he then brought back his gun, ammunition, and one severely wounded man unable to walk. Finally, he himself returned and removed all remaining arms and equipment except two shovels.

But for his great gallantry and determination our line must have been penetrated by the enemy.

The Indian War Loan.

A report on the results of the Indian War Loan, by the Controller of Currency, was issued in September, 1917.

The loan was for an unlimited amount and was divided into three parts—

(I) The 5 per cent. War Loan 1929—47.

(II) The 5½ per cent. War Bonds 1920 and War Bonds 1922.

(III) Post Office 5-years Cash Certificates.

The 5 per cent. War Loan 1929—47, was issued at a discount of 5 per cent. and the 5½ per cent. War Bonds 1920 and War Bonds 1922 were issued at par and free of income tax. Subscriptions to the 5 per cent. War Loan 1929—47 carry with them the right of conversion of the 3 and 3½ per cent. loans and the 4 per cent. Conversion Loan of 1916 according to the terms specified in clauses 3 and 4 of the Notification. The loan was open during the period from the 15th March to the 15th June 1917.

Contributions to the Loan:—

Province.	Amount.
	Rs.
Bombay	10,65,08,600
Bengal	10,46,54,100
Punjab	3,55,68,800*
United Provinces	3,21,32,300
Madras	2,29,30,200
Burma	2,00,72,400
Central Provinces	74,39,500
Bihar and Orissa	54,87,900
Assam	9,02,600
Minor Administrations ..	1,55,67,100
Hyderabad	1,12,80,800
Gwalior	88,21,100
Mysore	54,35,500
Baroda	31,57,800
Subscriptions by means of British Treasury Bills.	1,64,11,600
Subscriptions under the Government scheme.	24,27,600
Total ..	39,96,97,900

* Includes 40 lakhs and 25 lakhs subscribed by His Highness the Nawab of Bahawalpur and His Highness the Maharaja of Patiala respectively.

The above classification has been made according to the place of payment, and is admittedly defective inasmuch as it does not exhibit accurately the efforts of the several Provinces.

The total of the subscriptions under the several heads is shown in the following table:—

	5% War Loan 1929—47.	5½% War Bonds 1920.	5½% War Bonds 1922.	Total.
	Rs.	Rs.	Rs.	Rs.
(i) Main section	10,80,85,400	16,77,82,500	10,49,90,800	38,08,58,700
(ii) Government Scheme ..	2,99,700	13,82,400	7,45,500	24,27,600
(iii) Treasury Bills	97,60,500	66,51,100	..	1,64,11,600
Total ..	11,81,45,600	17,58,16,000	10,57,36,300	39,96,97,900

The total allotment on account of subscriptions to the loan paid in England in British treasury bills up to date has amounted to Rs. 1,64,11,600, distributed as follows:—

5% War Loan 1929—47.	5½% War Bonds 1920.	5½% War Bonds 1922.	Total.
Rs.	Rs.	Rs.	Rs.
97,60,500	66,51,100	*Nil*	1,64,11,600

The announcement of the conditions of the new War Loan was received with general approval in India. Whilst the conversion terms were regarded as rather too narrow, the three and five year War Bonds were greeted as entirely suited to Indian conditions and the cash certificates were specially regarded as an entirely appropriate encouragement to saving in India. In many parts of the country great public enthusiasm was enlisted on the side of the Loan. Unofficial committees were established who worked assiduously to induce the public to subscribe. This developed into a

friendly duel between Calcutta and Bombay, as to who should subscribe most largely to the Loan which resulted at the last moment in a narrow victory for the Bombay Presidency, the actual subscriptions being Calcutta, Rs. 10,47,85,900 and Bombay Rs. 10,62,31,800. The chief feature of the loan was the large subscriptions made by Joint Stock Companies out of their reserve funds which were almost entirely invested in the short term bonds.

According to a Communique issued by the Government of India on the 7th September, the total amounted to a little over Rs. 50 crores (£33,333,333). Whilst this may seem a comparatively small sum in relation to the size of the country and the enormous proportion of the War Loan in the United Kingdom, a comparison with the past will illustrate the magnitude of the effort made. In pre-war years the Finance Member considered himself fortunate if he could raise Rs. 3¾ crores in India without seriously compromising the market. The largest loan ever previously raised in a previous year was a little over Rs. 7½ crores. This brief comparison illustrates both the financial progress of India and the response which was made to the appeal for funds. The whole proceeds of the loan were spent in India to meet military charges which will be ultimately be borne by the Home Government.

The Communique issued on September 7th to which reference has been made, gives the following figures.

The total loan figures are:—

	Rs.
Main Section	38,36,18,800
Treasury Bills (received in England)	1,64,11,600
Post Office Section	3,21,99,550
Cash Certificates	7,10,93,935
Total Rs. ..	50,33,23,885

Applications to the War Loan received through Post Office are as under:—The figures for the Post Office section are for the period ended August 29, and Cash Certificates for the period ended August 23.

Provinces.	Post Office.	Cash Certificates.	Total.
	Rs.	Rs.	Rs.
Bombay ..	72,82,050	1,84,85,455	2,57,67,505
Punjab ..	61,59,900	1,30,81,039	1,92,40,939
Central ..	47,43,075	1,32,03,822	1,79,46,897
United Provinces ..	51,53,875	88,68,395	1,40,20,270
Bengal ..	36,72,.00	60,94,329	97,66,629
Burma ..	17,92,300	54,50,110	72,42,410
Madras ..	19,06,350	24,47,450	43,53,800
Bihar and Orissa ..	11,66,400	25,88,066	37,54,466
Assam ..	3,23,300	8,77,269	12,00,569

A Gold Mint.

Reference will be found in the section relating to Currency to the question of establishing a gold mint in India. This is one of the hardy annuals of the Indian Currency discussion. When, on the report of the Fowler Commission of 1898, it was definitely decided to take India to a gold standard supported by an active gold currency, a gold mint was regarded as an integral feature of the scheme. Proposals were framed by the Government of India and the project formed the subject of continued correspondence between the Government of India and the Home authorities. Whilst this was proceeding the beginnings of the Gold Standard Reserve were established out of the profits on coining rupees and the early efforts to establish an active gold circulation were not successful. When the discussion relating to the establishment of a mint was approaching its climax it was suddenly switched off by the suggestions of the Treasury Officials that it was unnecessary. Thereafter the project lapsed although a large section of Indian financiers continued to press for a gold mint. This, like other currency questions, was automatically solved during the war: the need for converting gold bullion received in India into currency was so insistent that a gold mint was sanctioned. In the course of a speech in the Imperial Legislative Council on the 5th September His Excellency the Viceroy announced that the Home Treasury have agreed, "as a provisional measure subject to reconsideration after the war, to our undertaking the coinage of sovereigns at Bombay, a branch of the Royal Mint being constituted there for the purpose. These arrangements will be given effect to as soon as possible, but the settlement of details will necessarily take a little time."

It is understood that whilst in one sense a part of the Bombay Mint and in the same enclosure, the gold mint will be entirely under the direction of the management of the officers of the Royal Mint. It is also stated that the productive capacity of the mint is based on the coining of thirty thousand sovereigns per diem.

Racing.

Calcutta.

[*Season* 1916-17].

The Viceroy's Cup. Distance 1¼ miles.—

Mr. R. R. S.'s Bachelor's Wedding (9st. 3 lbs.), Ruiz 1
Mr. R. R. S.'s Magyar (9st. 3lbs.), F. Templeman 2
Mr. Wadia's Fizyama (8st 11lbs.), Barrett.. 3
Raikut of Baikanthpore's Bydand (9st). Buckley 4

Also Ran:—Kiltoi (9st. 3lbs.), Spenser (9st. 3lbs.) and Buskin (8st. 11lbs.).

Won by a short head; one and three-quarter length; one and a quarter length. Time. —3 mins. 0.3-5 secs.

King Emperor's Cup. Distance 1 mile.—

Mr. R. R. S.'s Silver Balm (9st. 3lbs.), F. Templeman 1
Mr. M. Goculdas' Salandra (8st. 7lbs.), W. Huxley 2
Raikut of Baikanthpor's Bydand (9st.3lbs.), Buckley 3
Mr. Thaddeus' Evett (9st. 3lbs.), Ruiz .. 4

Won by 1 length, 1¼, 4½; Time—1-39⅘.

The Governor's Cup. Distance 1¼ miles.—

Mr. M. Goculdass' Matchlock (8st. 7lbs.), W. Huxley 1
Mr. Wilton Bartlet's Santa Barbara (7st. 10lbs.), Lynch 2
Mr. M. Goculdass' Royal Ambition (8st. 11lbs.), Flynn 3
Mr. W. Saunder's Second Edition (7st. 11lbs.) carried 7st. 13lbs.), Wing 4

Also Ran:—Marcianus (8st. 9lbs.), Screamer (7st. 10lbs.), and Shining Way (6st. 7lbs. carried 6st. 13lbs).

Won by three quarter length; half a length; four lengths. Time.—3 mins. 4 secs.

The Metropolitan. Distance 6 furlongs.—

Mr. W. Lauder's Symrex (8st. 10lbs.), Stokes 1
Mr. Thaddeus' Pastime (8st. 12lbs.), Ruiz.. 2
Messrs. A. Nanjee and Ramshaw's Pantomime (8st. 3lbs.), Flynn 3
Mr. Palonjee's Radiant (9st. 3lbs.), Wing .. 4

Also Ran:—Salandra (9st. 12lbs.), Dersingham (8st. 9lbs.), Forfeit Lass (8st. and Widglewa (7st. 10lbs).

Won by three-quarters of a length; a neck; one and a half length. Time.—1 min. 13 3 secs.

Prince of Wales' Plate. Distance 1 mile.—

Messrs. A. Nanjee and Ramshaw's Pantomime II. (8st. 6lbs.), Flynn 1
Mr. Goculdass' Swanker (8st. 11lbs.), W. Huxley 2
Mr. Y. Marshall's Boss Lee (7st. 3lbs., carried 7st. 9lbs.), Vick 3
Mr. Wilton Bartleet's Santa Barbara (7st 8lbs.). Lynch 4

Also Ran:—Evett (9st), Dersingham (8st. 10lbs.), Symrex (8st 8lbs.), and Aberdare (8st 7lbs).

Won by two and a half lengths; one and a half lengths: short head. Time.—1 min. 40 secs.

Burdwan Cup. R. C. and distance.—

Mr. Goculdass' Politian (10st. 13lbs.), Northmore 1
Mr. A. Coningham's Blackmailer (9st.10lbs.), Clark 2
Mr. Kelso's Screamer (9st. 10lbs.), Scott .. 3

Won comfortably by one length; half a length. Time.—3 mins. 20 1-5 secs.

The Cooch Behar Cup. Distance 1¼ mile.—

Mr. Goculdass' Politian (8st. 12lbs.), W. Huxley 1
Mr. Goculdass' Matchlock (7st. 9lbs.), Flynn 2
Mr. Goculdass' Royal Ambition (7st. 6lbs.), Purtoosingh 3
Mr. Merven's Dersingham (9st. 10lbs.), Barrett 4

Won by three-quarters of a length; same; a neck. Time—2 mins. 6 3-5 secs.

Calcutta Plate. Distance 6 furlongs.—

Messrs. Goculdass and Garda's Salandra (8st 9lbs.), W. Huxley 1
Mr. R. R. S.'s Patrick (9st. 3lbs.), F. Templeman 2
Mr. Pallonji's Radiant (9st. 3lbs.), Ruiz .. 3
Mr. Walsh's Eagle's Nest (8st. 3lbs.), Wing 4

Won comfortably by two lengths; one and three-quarters length; a neck. Time.—1 min. 14 secs.

The Grand Annual. Distance 2 miles over 8 flight of hurdles.—

Mr. Kelso's Screamer (10st. 8lbs.), A. Scott.. 1
Mr. Goculdass' Knight's Key (11st), Northmore 2
Zemindar of Nezergunge's Canberra (10st. 12lbs.), Ferguson 3
Mr. Conningham's Blackmailer (10st. 7lbs.), Clarke 4

Also Ran:—Dolly Dimple (10st. 2lbs.), Lesto (10st.) and Brandichoc (9st. 5lbs).

Won by three and a half lengths; same distance; one length. Time.—3 mins. 46 1-5 secs.

The Macpherson Cup. Distance—8t. Leger Course. (1 m. 6 fur. 132 yards).

General Nawabzada Obaidulla Khan's Kiltoi (9st 5lbs.), Ruix .. 1

Mr. R. R. S.'s Magyar (9st 9lbs.), F. Templeman 2
Mr. Wilton Bartleet's Santa Barbara (7st, carried 7st. 11lb.), Lynch 3
Mr. Sander's Second Edition (7st 5lbs, carried 7st. 6lbs.), Stokes 4
Also Ran.—Knight's Key (8st. 2lbs. carried 8st. 3lbs.), Aberdare (7st. 11lbs, carried 8st 4lbs.), Laveco (7st 6lbs.), Esperance (7st. 3lbs.).
Won by three-quarter length; a short head; two lengths. Time—3 mins. 9 2-5 secs.

The Merchants' Plate. Distance 1½ miles.—

Mr. Goculdass' Royal Ambition (8st 11lb.), Flynn 1
Mr. Kelso's Screamer (7st 11lbs. carried 7st 13lbs.), Wing 2
Mr. Goculdass' Matchlock (9st) W. Huxley .. .. .. } Dead heat .. 3
Mr. Wilton Bartleet's Santa Barbara (7st 12lbs.), Lynch .. }
Also Ran —Midsand (6st. 8lbs, carried 6st. 12lbs.).
Won by two lengths; three lengths; dead-heat for third place. Time.—2 mins. 34 1-5 secs.

International Pony Plate. Distance 7 furlongs.—

Mr. Goculdass' Gipsy's Advice (9st. 13lbs.), W. Huxley 1
Mrs. John Peter's Regal Sally (8st. 8lbs. carried 8st. 9lbs.), F. Templeman .. 2
Mr. Butler's Nareb (9st. 10lbs.), Firth .. 3
Won by half a length; one and three-quarter length. Time.—1 min. 31 1-5 secs.

Sandown Park Plate. Distance 6 furlongs.—

Mr. W. Lauder's Symrex (8st 2lbs.), Stokes. 1
Mr. Goculdass' Verge (8st. 3lbs.), W. Huxley 2
Mr. Thaddeus' Pastime (8st. 8lbs.), Ruiz.. 3
Messrs. Nanjee and Ramshaw's Pantomime II. (7st. 10lbs.), Flynn 4
Won by a neck; one and a half length; a head. Time.—1 min. 14 secs.

The Gunny Meah Cup. Distance 1¼ miles.—

Mr. Galstaun's Wallace Plaid (6st. 13lbs.), Purtoosingh 1
Mr. D. Norton's Simon's Light (7st.) Vincent 2
Mr. Bate's Masonic (8st. 5lbs.), Firth .. 3
Mr. Rosco's Naini (7st. 3lbs. carried 7st. 7lbs.), Stokes 4
Won by a head; two and a quarter lengths; two lengths. Time.—2 mins. 43 4-5 secs.

Hooghly Plate. Distance 6 furlongs.—

Mr. Thaddeus's Pastime (8st. 13lbs.), Ruiz. 1
Mr. Goculdass' Swanker (8st. 8lbs.), W. Huxley 2
Messrs. Nanjee and Ramshaw's Pantomime, II. (8st. 4lbs.), Flynn 3
Mr. Sander's Symrex (9st.), Stokes .. 4
Also Ran:—Buskin (8st. 10lbs.), and Evett (8st. 2lbs.).
Won by a short head; three-quarter length; one length. Time.—1 min. 13 3-5 secs.

Chowringhee Plate. Distance 7 furlongs.—
Messrs. Nanjee and E. Ramshaw's Pantomime II (7st. 12lbs.), Flynn 1
Mr. Goculdas's Swanker (8st. 6lbs.), W. Huxley 2
Mr. Lauder's Symrex (8st. 9lbs.) Mr. Thaddeus' Evett (9st. 11b.) Ruiz. } Dead heat.
Also Ran:—Dersingham (8st. 13lbs.).—
Won by a neck; three length from Evett and Symrex who dead-heated. Time—1 min. 26 3-5 secs.

[*Season* 1917-18.]

King Emperor's Cup. Distance 1 mile. —
Mr. R. R. S.'s Magyar (9st. 3 lbs), F. Templeman 1
Mr. Goculdass' Swanker (9st. 3 lbs), J. Flynn 2
Raikut of Baikanthpur's Bydand (9st. 3 lbs.), Rose 3
Mr. Allan's Marcians (9st. 3 lbs), Heron .. 4
Also Ran.—Salandra (9st. 3 lbs.), Evett (9st. 3 lbs.), and Silver Balm (9st. 3 lbs.).
Won by one length half a length, and three quarter length. Time—1min. 40 1-5secs.

The Burdwan Cup. Distance St. Leger Course—
Mr. Coningham's Blackmailer (10st. 3 lbs.), Williamson 1
Mr. Pugh and Olpert's Lesso (9st. 10 lbs.), Crowden 2
Mr. Edward's Whippoorwill (9st. 10 lbs.), Heron 3
Also Ran.—Yuan (9st. 10 lbs.).
Won by three and half lengths, three lengths; seven lengths. Time.—3mins. 24secs.

Bombay.

The Byculla Club Cup. Distance 1½ miles.—
Mr. E. L. F. DeSoysa's Summer Thyme (7st. 4lbs.), J. Rose 1
Mr. M. Goculdass' Politian (9st. 7lbs.), W. Huxley 2
Mr. Wilton Bartleet's Santa Barbara (6st. 13lbs., carried 7st.), Lynch 3
Genl. Nawabzada Obaidula Khan's Kiltoi (9st. 12lbs.), J. Trenoweth 4
Also Ran.—Magyar (9st. 12lbs.), Silver Balm (9st. 11lbs.), Bachelor's Wedding (9st. 7lbs.), Spenser (6st., carried 7st. 5lbs.), Matchlock (8st. 11b.), Royal Ambition (7st. 12lbs.), Evett (8st. 6lbs.), Screamer (6st. 8lbs.), Laveco (6st. 11lbs., carried 7st.,) and Kim III. (6st., carried 6st. 10lbs.).

Won by one and three-quarter length; a head between second and third; half a length between third and fourth. Time.—2 mins. 26 secs.

The Grand Western Handicap. Distance 1 mile.—

Messrs. F. M. Garda and M. Goculdass' Salandra (9st. 11lbs.), W. Huxley .. 1

Mr. T. M. Thaddeus' Evett (8st. 2lbs., carried 8st. 3lbs.), Ruiz 2

Messrs. J. H. Skelton and W. R. Pechey's Llangeinor (8st. 6lbs.), Pullin 3

Mr. M. Goculdass' Politian (8st. 12lbs.), Bowley 4

Also Ran.—Silver Balm (9st. 12lbs.), Criton (8st.), Kiltoi (9st. 5lbs.), Silver Thrush (8st. 12lbs.), Joyous Gard (7st. 2lbs.), Triple Alliance (7st. 6lbs.), Screamer (7st. 5lbs.), Summer Thyme (7st. 3lbs., carried 7st. 8lbs.), Thunder (7st. 11lb., carried 7st. 2lbs.), Santa Barbara (6st. 11lbs., carried 6st. 13lbs.),and Carpentia (6st., carried 6st. 13lbs.).

Won by half a length, a neck dividing each of the others. Time.—1 min. 39 secs.

The Bombay City Plate. Distance 1¼ miles—

Mr. R. R. S.'s Magyar (9st. 3lbs.), J. Ruiz.. 1

Mr. R. R. S.'s Silver Balm (9st. 10lbs.), F. Templeman 2

General Nawabzada Obaidulla Khan's Kiltoi (9st. 3lbs.), J. Treacweth .. 3

Mr. M. Goculdass' Politian (9st. 3lbs.), W. Huxley 4

Also Ran.—Cromdale (9st.)

Won by 3 lengths, half length between second and third and 4 lengths between third and fourth. Time.—2 mins. 9 secs.

The Malabar Hill Plate. Distance about 6 furlongs.—

Messrs. F. M. Garda and M. Goculdass' Salandra (9st. 8lbs.), W. Huxley.. .. 1

Mr. R.R. S.'s Patrick (9st. 3lbs.), F. Templeman 2

Mr. R. R. S.'s Bachelor's Wedding (9st. 3lbs.), J. Ruiz 3

Messrs. Heath and Stewart's Roi d' Ecosse (8st. 9lbs.), F. Hardy 4

Won by 2 lengths; 1½ lengths between second and third; 2½ lengths between third and fourth. Time.—1 min. 14 secs.

The Willingdon Plate. Distance 1¼ mile.—

Mr. M. Goculdass' Politian (9st. 2lbs.), W. Huxley 1

Mr. E. L. F. De Soysa's Summer Thyme (7st. 11lb.), J. Rose 2

Mr. M. Goculdass' Gibberish (6st. 13lbs.), Purtoosingh 3

Mr. T. M. Thaddeus' Evett (8st. 9lbs.), L. Ruiz 4

Also Ran.—Magyar (9st. 12lbs.), Bachelor's Wedding (9st. 10lbs.), Silver Thrush (8st. 9lbs.), Pantomime II. (8st. 4lbs.), Thunder (7st. 11lbs., carried 7st. 2lbs.), and Santa Barbara (6st. 13lbs.),

Won by a neck; a head between second and third; one length between third and fourth Time.—2 mins. 6 secs.

The Mansfield Plate. Distance about 6 furlongs.—

Mr. M. Goculdass' Verge (9st.), W. Huxley .. .. } Dead heat 1
Mr. J. L. Ainsworth's Vanity Box (6st. 4lbs., carried 6st. 12lbs.), J. Rose .. .. }

Messrs. J. H. Skelton and W. P. Pechey's Llangeinor (8st. 2lbs.), Pullin 3

Mr. T. M. Thaddeus' Pastime (8st. 6lbs.), J. Ruiz 4

Also Ran.—Forward III. (8st. 9lbs.), Forfeit. Lass (7st. 11lbs.), Criton (7st. 5lbs.), Black Kite (6st. 10lbs., carried 7st.), Tootsie (7st. 2lbs.), Triple Alliance (6st. 10lbs., carried 7st.) and Premiere (6st., carried 7st. 5lbs.).

Dead heat; head; neck. Time.—1 min. 14 secs.

The Flying Plate. Distance 5 furlongs (straight).—

Mr. M. Goculdass' Forward III. (8st. 3lbs.), Bowley 1

Mr. M. Goculdass' Verge (8st. 8lbs.), W. Huxley 2

Mr. M. Goculdass' Forfeit Lass (7st. 8lbs.), Purtoosingh 3

Messrs. Heath and Stewart's Tootsie (7st. 3lbs.), Harrison 4

Also Ran.—Patrick (9st.), Black Kite (6st. 12lbs., carried 6st. 13lbs.), Pastime (8st. 8lbs.), Binfield Grove (6st. 2lbs.. carried 7st.), and Kenilworth (6st., carried 6st. 11lbs.).

Time.—57½ secs.

The Innovation Plate. Distance about 7 furlongs.—

Messrs. J. H. Skeleton and W. P. Pechey's Liangeinor (8st.), Bowley 1

Mr. R. R. S.'s Criton (8st.), Pullin 2

Mr. J. L. Ainsworth's Vanity Box (7st. 3lbs.), Rose 3

Mr. T. M. Thaddeus' Pastime (9st. 6lbs.), J. Ruiz 4

Also Ran.—Primrose Morn (8st. 12lbs.), Silver Thrush (9st.), Tootsie (8st.), Pantomime II (8st. 8lbs.), Dersingham (8st. 3lbs.), Triple Alliance (7st. 10lbs.), Summer Thyme (7st. 7lbs.), Laveco (7st. 3lbs.), and Miss Rollestone (7st. 11b.).

Won by 1½ lengths, ½ length between second and third and a neck between third and fourth. Time.—1 min. 30 secs.

The Turf Club Cup. Distance 1½ miles.—

General Nawabzada Obaidulla Khan's Singer (8st. 10lbs.), Collis 1

Mr. R. R. S.'s Majbur (9st. 12lbs.), F. Hardy. 2

Mr. R. R. S.'s Kayid (9st.), J. Ruiz.. .. 3

General Nawabzada Obaidulla Khan's Purity (8st.), Pullin 4

Also Ran.—Longboat (7st. 4lbs.), Gold Fish II. (8st. 9lbs.), Beyrut (8st. 6lbs.), Ruby Mine (7st. 4lbs.), Station (7st. 11b. carried 7st. 5lbs.), Nizam-ul-Mulk (6st. 10lbs., carried 7st. 5lbs), Excelsior (6st. 5lbs., carried 7st.), Gazal (6st. 3lbs., carried 6st. 13lbs.), Black Hussar (6st. 11b., carried 6st. 12lbs.), Burg (6st., carried 6st. 11lbs.), and Makbul (6st. carried 7st.).

Won by one length; half a length between second and third; a head between third and fourth. Time.—2 min. 51 secs.

The Bombay Derby. Distance 1½ miles.—

Mr. R. R. S.'s Majbur (9st. 8lbs.), F. Templeman 1

Mr. R. R. S.'s Kayid (9st. 8lbs.), J. Ruiz .. 2

General Nawabzada Obaidulla Khan's Gold Fish II (9st. 5lbs.), F. Hardy .. 3

General Nawabzada Obaidulla Khan's Singer (9st. 7lbs.), Collis 4

Also Ran.—Longboat (8st. 5lbs), Tajilmulook (8st. 5lbs.), Advance (8st. 11b., carried 8st. 2lbs.), and Raven (6st. 4lbs., carried 6st. 12lbs.).

Won by 2 lengths; a neck; a head. Time.—2 mins. 52½ secs.

The Dealers' Plate. Distance 1 mile.—

Mr. R. R. S.'s Majbur (8st. 11lbs.), F. Templeman 1

Mr. Ali bin Talib's White Silk (8st. 7lbs.), J. Ruiz 2

Messrs. J. Stewart and Heath's East Court, (8st. 3lbs.), F. Hardy 3

General Nawabzada Obaidulla Khan's Gold Fish II (9st.), Collis 4

Also Ran.—Beyrut (9st. 8lbs.), Singer (9st. 4lbs.), Black Hussar (8st. 2lbs.), and Raven (6st. 11lbs.)

Won by ½ length; 2 lengths between second and third; ¾ length between third and fourth. Time.—1 min. 49 secs.

The Second Dealers' Plate. Distance 1 mile.—

Winner Rs. 5,000, second Rs. 1,000, third Rs. 500 for newly landed Arabs.

General Nawabzada Obaidulla Khan's Fury (8st. 8lbs.), J. Ruiz 1

Messrs. A. S. Oomer and A. Nanjee's Four Aces (8st. 8lbs.), A. Templeman 2

General Nawabzada Obaidulla Khan's California (7st. 5lbs.), Collis 3

Messrs. M. Goculdass' and P. Mathradass' Rose Hill (7st. 9lbs.), Purtoosingh .. 4

Also Ran.—Full House (8st. 12lbs.), Launceston (8st. 12lbs.), Edward (8st. 12lbs.), Machine Gun (8st. 12lbs.), Pacific (8st. 8lbs.), Natal (7st. 5lbs.), Legislator (8st. 8lbs.), Davidom (8 t. 8lbs.), Bhookhri (8st. 8lbs.), Starling (7st. 5lbs.), Baloon (7st. 9lbs.), Bill Bailey (7st. 5lbs.), and Union Jack (6st.).

Won by 1 length, half length between second and third, and a length between third and fourth. Time.—1 min. 51 1-5 secs.

The Melton Plate. Distance about 6 furlongs.—

Messrs. Downes and A. S. Oomer's Niger (7st. 8 lbs.), Japheth .. } Dead
Mr. Heath's Innocence (8st. 10lbs.), Bowley .. .. } heat 1

Messrs. A. K. Dakayel and E. Ghumia's Fury (7st. 8lbs.), Collis 3

Messrs. A. S. Oomer and A. Nanjee's Four Aces (9st.), A. Templeman 4

Also Ran.—Bhookri (9st.), Legislator (9st.), Sir Martin (9st.), Garland (9st.), Starling (8st. 2lbs.), Natal (8st. 10lbs.), Second String (8st. 10lbs.), Adil (8st. 6lbs.), Union Jack (8st. 6lbs.), and Argonaut (8st. 2lbs.).

Dead heat; head; neck. Time—1 min. 25 secs.

Run Off.—Messrs. Downes and A. S. Oomer's Niger (7st. 8lbs.), Japheth .. 1

Mr. Heath's Innocence (8st. 10lbs.), Bowley. 2

Won by 2½ lengths. Time.—1 min. 25 secs.

The Tom Le Mesurier Plate. Distance 1 mile.—

Mr. R. R. S.'s Zaki Pasha (8st. 12lbs.), F. Templeman 1

Mr. Ali bin Talib's Tamooz (8st. 6lbs.), J. Ruiz 2

Mr. Hammond's Durban (8st. 2lbs.), Bowley 3

Mr. Dara Cowasjee's Red Cross (9st. 2lbs.) F. Hardy 4

Also Ran.—Biglig (8st. 6lbs.), Burg (8st. 2lbs.), and Ruby Fish (7st. 4 lbs.)

Won by 1½ lengths; a head between second and third and half length between third and fourth. Time—1 min. 50 secs.

The Gough Memorial Plate. Distance about 6 furlongs.—

Mr. Dara Cowasjee's Red Cross (9st. 3lbs.), F. Hardy 1

Mr. R. R. S.'s Zaki Pasha (9st. 12lbs.), F. Templeman 2

Mr. Mubarak's Defender (8st. 4lbs.), J. Trenoweth 3

General Nawabzada Obaidulla Khan's Ruby Fish (6st., carried 6st. 11lbs.), Purtoosingh 4

Also Ran.—Durban (8st. 8lbs.), Vellard (7st. 13lbs., carried 8st. 11b.), Young Majub (7st. 7lbs.), Maasal (7st. 2lbs., carried 7st. 3lbs.), and Engine (6st. 3lbs., carried 7st. 11b.).

Won by 1½ lengths; ¾ length between second and third, and a neck between third and fourth. Time.—1 min. 21 secs.

The Sir Cowasjee Jehangir Plate. Distance about 6 furlongs.—

Messrs. Stewart and Heath's East Court (9st. 4lbs.), Bowley 1

Mr. A. Nanjee's Ace of Royals (7st. 4lbs.), Ringstead 2

General Nawabzada Obaidulla Khan's Mohsel (8st. 2lbs.), Collis 3

Mr. Dara Cowasjee's Red Cross (9st. 9lbs.), F. Hardy 4

Also Ran.—Zaki Pasha (9st. 12lbs.), Vellard (7st. 11lbs.), White Silk (9st. 9lbs.), Nizam-ul-Mulk (8st. 8lbs.), Royal Court (8st. 2lbs.), and Osprey (7st. 11b.).

Won by half a length; three-quarter length between second and third; a length between third and fourth. Time.—1 min. 21 secs.

The Gaye Plate. Distance 1¼ miles.—

Mr. R. R. S.'s Majbur (9st. 12lbs.), F. Templeman 1

General Nawabzada Obaidulla Khan's Singer (9st. 3lbs.), Collis 2

Messrs. M. Goculdass and P. Mathradass' Ruby Mine (8st.), J. Flynn 3

General Nawabzada Obdaidulla Khan's Purity (8st. 12lbs.), F. Hardy 4

Also Ran.—Beyrut (9st. 5lbs.), White Silk (8st. 2lbs.), Money Gold (8st. 9lbs.), Sir Knight (8st. 4lbs.), Royal Court (7st. 9lbs.), Ajax (7st. 13lbs.), Section (7st. 11lbs., carried 8 st.), Nizam-ul-Mulk (7st. 10lbs.), Excelsior (7st. 5lbs., carried 7st. 10lbs.), Gazal (7st. 3lbs.), Malacca (7st. 3lbs.) and Pasha (6st., carried 7st.).

Won by 1½ lengths; half length; 1 length. Time.—1 min. 21¾ secs.

Poona.

The Governor's Cup. Distance R. C. and distance.—

General Nawabzada Obaidulla Khan's Purity (9st. 11b.), Ruiz .. .. } Messrs. M. Goculdass and Mathuradass' Ruby Mine (8st. 3 lbs.), W. Huxley .. } Dead heat. 1

Mr. Heath's Collingwood (9st. 4 lbs.), Bowley 3

Mr. S. A. Wahed's Peacemaker (8st. 5 lbs.), Rose 4

Also Ran.—Gold Fish II (9st. 12 lbs.), Kayid (9st. 10 lbs.), Longboat (8st. 1 lb.), Beyrut (9st. 6 lbs.), Bluey Lee (6st. 8 lbs.), Sir Knight (8st. 8 lbs.), Nawabzada (8st. 1 lb.), Black Hussar (7st. 13 lbs.), Tailmulook (7st. 7 lbs.), Maazool (8st. 3 lbs.), Gazal (7st. 6 lbs., carried 7st. 7 lbs.), and Advance (6st. 12 lbs.).

Purity and Ruby Mine dead-heated, 1½ length, neck. Time—3 min. 7 secs.

The Western India Stakes. Distance 1½ miles.—

General Nawabzada Obaidulla Khan's Spenser (6st., carried 6st. 12lbs.) Purtoosingh 1

Mr. Goculdass' Swanker (9st. 2lbs.) W. Huxley 2

Major Sir G. Beaumont's Dorian (6st., carried 6st. 8lbs.) Japheth 3

Messrs. Ramshaw's and A. Nanjee's Pantomime II (8st. 6 lbs.), Rose 4

Also Ran :—Kiltoi (9st. 12 lbs.), Bachelor's Wedding (9st. 8 lbs.), Footman (7st. 7 lbs.), Matchlock (7st. 12 lbs.), Royal Ambition (7st. 6 lbs., carried 7st. 7 lbs.), Thunder (8st. 12 lbs.), Triple Alliance (8st. 6 lbs.), Silver Thrush (8st. 4 lbs.), Dersingham (8st. 1 lb.), Brownii (6st. 13 lbs., carried 7st. 4 lbs.), Screemer (6st. 12 lbs, carried 7st. 1 lb.), and St. Guthlac (6st.).

Won by ¾ length, neck, neck. Time—2 min. 13 secs.

Aga Khan's Cup. Distance 1½ miles.—

Hasting's and Guthrie's Thunder (7st. 10lbs.), Harrison 1

Mr. M. Goculdass' Swanker (8st. 1 lb.), W. Huxley 2

Mr. Merven's Dersingham (7st. 10 lbs., carried 7st. 11 lbs.), Pullin 3

General Nawabzada Obaidulla Khan's Kiltoi (9st. 3 lbs.), Ruiz 4

Also Ran :—Magyar (9st. 3 lbs.), Footman (7st. 7 lbs.), Bydand (7st. 10 lbs.), Brownie (7st. 7 lbs).

Won by head, 2 lengths, 1 length. Time—2 min. 39 secs.

St. Leger Plate. R. C. and Distance.—

Miss H. F. Petit's Screamer (7st. 11b., carried 7st. 2 lbs.), Lynch 1

H. H. the Jam Sahib's Brownii (6st. 7 lbs., carried 6st. 9 lbs.), Japheth 2

Mr. M. Goculdass' Matchlock (7st. 12lbs.), Flynn 3

Mr. R. R. S.'s Bachelor's Wedding (9st. 6 lbs.), Hardy 4

Also Ran :—Kiltoi (9st. 12 lbs.), Spenser (7st. 7 lbs.), Footman (7st. 6 lbs.), Royal Ambition (7st. 7 lbs.), Joyous Gard (6st. 8 lbs., carried 7st. 6 lbs.), and Gravelotte (6st.).

Won by 1 length, 3 lengths, 2 lengths. Time—2 min. 53 secs.

Turf Club Cup. Distance 1½ miles.—

Mr. A. S. Oomer's Nawabzada (8st. 1 lb.), Japheth 1

Messrs. A. Nanjee and U. Moosajee's Gazal (7st. 6 lbs.). Harrison 2

Mr. R. R. S.'s Kayid (9st. 10 lbs.), Hardy.. 3

Mr. T. Esmail's Ajmer (6st. 6 lbs., carried 6st. 12 lbs.), Purtoosingh 4

Also Ran :—Gold Fish II (9st. 12 lbs.), Collingwood (9st. 9 lbs.), Beyrut (9st. 6lbs.), Ruby Mine (8st. 12 lbs.), Longboat (7st. 13 lbs.), Section (7st. 12 lbs.), Black Hussar (7st. 11 lbs.), and Morning Light (6st.).

Won by head, neck, 1½ length. Time.—2 min. 63 secs.

Poona Derby. Distance 1½ miles—

Mr. Heath's Collingwood (9st. 7 lbs.), Bowley 1

Mr. Ali bin Talib's Mooltan (8st. 11 lbs.), Ruiz.. 2

Mr. S. A. Wahed's Black Hussar (6st.), Rose. 3

Messrs. Goculdass and Mathradass' Rose Hill 8st. 12 lbs., carried 7st.), McCowan..

Also Ran :—Maazool (8st. 3 lbs., carried 8st. 5 lbs.), Nawabzada (8st. 10 lbs.), Morning Light (8st. 7 lbs.), and Ormuz (8st. 3 lbs.).

Won by ¾ length, head, length.

The Eclipse Plate. Distance about 5 furlongs.—

Mr. M. Goculdass' Verge (9st. 10 lbs.), Flynn 1

Mr. M. Goculdass' Forfeit Lass (7st. 7 lbs.), Purtoosingh 2

Messrs. J. Stewart and Guthrie's Tootsie (8st. 12 lbs.), A. Templeman 3

Mr. F. Garda's Camberley (7st. 13 lbs., carried 8st.), Bowley 4

Also Ran —Forward III (8st. 13 lbs.), All Silk (7st. 3 lbs.), Pastime (8st. 9 lbs.), and Llangeinor (8st. 8 lbs.).

Won by ¾ length. 3 lengths, 2 lengths. Time—1min. 2 secs.

The Ganeshkhind Plate. Distance 6 furlongs.—

Mr. M. Goculdass' Verge (8st. 12 lbs.), Flynn 1

Messrs. J. Stewart's and Guthrie's Tootsie (7st. 10 lbs.), Harrison 2

Mr. Thaddeus Pastime (8st. 6 lbs.). Ruiz.. 3

Messrs. Skelton and Pechey's Llangeinor (7st. 13 lbs.), Collis.. 4

Also Ran :—Salandra (9st. 12 lbs.), Forfeit Lass (7st. 2 lbs.), Vanity Box (6st. 10st.), Silver Thrush (8st. 2 lbs.), and Matchless Maud (6st. 5 lbs.).

Won by ¾ length, a neck, 1¼ length. Time—1min. 14 secs.

Poona Plate. Distance about 5 furlongs.—

Mr. Goculdass' Ali Bey (9st.), W. Huxley.. 1

Mr. J. L. Ainsworth's Radiant (8st. 1 lb.), Rose 2

Messrs. M. Goculdass' and F. Garda's Salandra (9st. 3 lbs.), Bowley 3

Also Ran :—Camberley (6st. 13lbs.), and All Silk (6st. 13 lbs., carried 7st. 1 lb.).

Won by ¾ length, 3 lengths. Time—1min. 2secs.

The Stand Plate. Distance 1 mile.—

Mr. Sorabjee Rustomjee's Triple Alliance (7st. 10 lbs.), Harrison 1

Mr. M Goculdass' Swanker (8st. 13 lbs.), W. Huxley 2

Messrs. Ramshaw's and A. Nanjee's Pantomime II (8st. 6 lbs.), Flynn 3

Mr. Thadden's Pastime (8st. 12 lbs.), Ruiz. 4

Also Ran :—Magyar (9st. 10 lbs.), Radiant (9st. 5lbs.) Silver Thrush (8st. 6lbs.), Dersingham (8st. 8 lbs.), and Spenser (6st., carried 6st. 12 lbs.).

Won by, ½ lengths, same, a neck. Time—1 min. 40 secs.

The Aga Shamshudin Plate. Distance 7 furlongs.—

Messrs. J. Stewart and Guthrie's Tootsie (7st. 12 lbs.), Harrison 1

Messrs. Skelton and Pechy's Llangeinor (7st. 10 lbs.), Collis.. 2

Mr. Ramshaw's and Nanjee's Pantomime II (8st. 2 lbs.), Flynn 3

Mr. M. Goculdass' Verge (9st. 5 lbs.), W. Huxley .. ..

Also Ran —Royal Ambition (7st. 2 lbs.), Bachelor's Wedding (9st. 3 lbs.), Radiant (8st. 12 lbs.), Carpentia (7st.), and Pastime (8st. 6 lbs.).

Won by a neck, two lengths. Time—1 min. 27½ secs.

H. H. The First Aga Khan's Commemoration Plate. Distance 1¼ miles.—

Mr. Ali bin Talib's White Silk (8st. 9 lbs.), W. Huxley 1

General Nawabzada Obaidulla Khan's Gold Fish (9st. 2 lbs.), Ruiz 2

General Nawabzada Obaidulla Khan's Purity (8st. 9 lbs.), E. Huxley 3

Mr. A. Oomer's Sir Knight (8st. 5 lbs.), Japheth 4

Also Ran :—Beyrut (9st. 10 lbs.), Kayid (9st. 7 lbs.), Collingwood (9st. 7 lbs.), and Mooltan (8st. 5lbs.).

Won by ¾ length, 2 lengths, ½ length. No time taken.

The Wanowrie Plate. Distance 7 furlongs.—

Mr. Hammond's Durban (8st. 1 lb.), Bowley. 1

Mr. A. Nanjee's Ace of Royals (8st. 9 lbs.), Buckley 2

Mr. Ali bin Talib's Tamooz (9st. 2 lbs.), Ruiz 3

Mr. S. A. Wahed's Peacemaker (8st. 8 lbs.), Rose 4

Also Ran :—Red Cross (9st. 6 lbs.), Zaki Pasha (9st. 2 lbs.), Baloz (8st. 12 lbs.), and Arrew (8st. 5 lbs.).

Won by 3½ lengths, 1½ lengths, 2 lengths. Time—1min. 39 secs.

The Arab Champion Plate. Distance R. C. and distance.—

Mr. R. R. S.'s Kayid (9st. 3 lbs.), Hardy.. 1

Mr. Heath's Collingwood (8st. 12 lbs.), Bowley 2

Mr. A. S. Oomer's Nawabzada (8st. 13 lbs.), Japheth 3

Messrs. M. Goculdass' and P. Mathuradass' Ruby Mine (9st. 3 lbs.), W. Huxley .. 4

Won by 3 lengths, 4 lengths, 4 lengths. Time—3 mins. 14 secs.

The Cursetjee Dhunjishaw Plate. Distance 1 mile.—

Mr. J. K. Irani's Excelsior (7st. 2 lbs.), Lynch 1

Messrs. Dara Cowasjee's and A. Begmahomed's Red Cross (8st. 4 lbs., carried 8st. 7 lbs.), Hardy 2

Mr. F. Garda's Nizam-ul-Mulk (8st. 2 lbs.), Pullin .. .. ..

Mr. S. A. Wahed's Black Hussar (7st. 9 lbs.), Rose 4

Also Ran:—White Silk (9st. 7 lbs.), Gold Fish II (9st. 2 lbs.), Baloz (9st.), Ace of Royals (8st. 11 lbs.), Beyrut (8st. 10 lbs.), Zaki Pasha (8st. 8 lbs.), Longboat (7st. 4 lbs.), and Durban (8st. 6 lbs.).

Won by ¾ length; 2 lengths, a neck. Time—1min. 55secs.

Arab Pony Derby. Distance 6 furlongs:—

Mr. Ali bin Talib's Tamooz (9st. 5 lbs.), Ruiz 1

Mr. Hammond's Durban (9st. 2 lbs.), Bowley .. .. } Dead heat. 2
Messrs. M. Goculdass' and Mathradass' Four Aces (8st. 8 lbs.), W. Huxley .. }

Mr. E. Gazee's Advance (8st. 8 lbs.), Purtoosingh 4

Also Ran:—Red Cross (9st. 13 lbs.), Ace of Royals (9st. 10 lbs.), Arrow (9st. 2 lbs.), and Najdi (8st. 8 lbs.).

Won by 1¼ lengths; from the dead-heaters, who were 1½ lengths in front of advance. Time.—1min. 13⅘ secs.

Dealers' New Plate. Distance 1¼ miles.—

Mr. A. S. Oomer's Union Jack (6st. 12 lbs.), Japheth 1

Mr. A. B. Zuheir's Zuheir (8st. 12 lbs.), Ruiz 2

Mr. Nanjee's Full House (8st. 10 lbs.), Buckley 3

Mr. R. R. S.'s Natal (8st.), Collis.. .. 4

Also Ran:—Garland (8st. 10 lbs.), Starling (8st.), Apollo (8st. 7 lbs.), St. Leger (8st. 7 lbs.), Devildom (8st. 7 lbs.), Pacific (8st. 7 lbs.), Brave Boy (8st. 6 lbs.), Goldfield (8st. 6 lbs.), Legislator (8st. 6 lbs.), Cingalee (8st.), C.D. (8st. 4 lbs.), Bill Bailey (7st. 10 lbs., carried 7st. 11 lbs.), and Banker (6st. 6 lbs., carried 7st.).

Won by 3½ lengths; 4 lengths; 6 lengths. Time—2mins. 27secs.

The Cecil Gray Plate. Distance 6 furlongs.—

Mr. Syed Rashid's Medallion (8st. 7 lbs.), Bowley 1

Mr. A. S. Oomer's Union Jack (9st. 6 lbs.), Japheth 2

Mr. Dixon's Bill Bailey (7st. 13 lbs.), Lynch 3

Messrs. M. Goculdass' and P. Mathradass' Garland (9st.) W. Huxley .. .. .. } Dead heat. 4
Mr. R. R. S.'s Natal (8st. 7 lbs.), Collis .. .. }

Also Ran:—The Knut (8st. 7 lbs.), Legislator (8st. 7 lbs.), Contest (8st. 7 lbs.), Vanguard (8st. 7 lbs.), Mercantile (8st. 3 lbs.), Royal Taj (8st. 3 lbs.), Adil (7st. 13 lbs.), Salaam at (7st. 13 lbs.), and Emerald (7st. 1 lb.).

Won by a head; ¾ length; same. Time—1min. 24secs.

Lucknow.

Civil Service Cup. Distance 6 furlongs.—

Mr. M. Goculdass' Symptome (10st. 7lbs), W. Huxley 1

Mr. John Peter's Lady Bunny (9st.), Ruiz. 2

Sirdar Jewansingh's Toglene (7st. 11lb.), Melsom 3

Mr. Galstaun's Frisette (9st. 9lbs.), Wing .. 4

Also Ran:—Pier (7st. 7lbs.), Grey Light (7st. 6lbs.), Token (6st. 13lbs.), Bonnie Blusth (6st. 12lbs.), and Shumshera (6st. carried 7st. 2lbs.).

Won by half a length; a short head; three-quarter length. Time.—1 min. 16 secs.

Lucknow Derby. Distance 1½ miles.—

H. H. the Maharajah of Patiala's May Boy (9st. 7lbs.), Ruiz 1

Thakore Sripal Singh's Talcum (8st. carried 8st. 3lbs.), Firth 2

Mr. A Watson's Silver Memory (8st. 2lbs. carried 8st. 3lbs.), Quinn 3

Also Ran:—Mil (8st. 11b).

Won by three-quarter length; a short head. Time.—2 mins. 38 1-5 secs.

Patiala Cup. Distance 1 mile.—

Mr. J. D. Scott's Sea Lad (9st. 10lbs.), Firth. 1

Kour Suram Singh's Roselawn (7st. 11lbs.), Lynch 2

H. H. General Nawabzada Obaidulla Khan's Imperialist (7st. 7lbs.), Collis 3

Also Ran:—Laconara (6st. 2lbs.), and Miller's Daughter (6st. carried 6st. 11lbs).

Won by three-quarters of a length; two and a quarter lengths. Time.—1 min. 47 secs.

Great Oudh Handicap. Distance 6 furlongs.—

Mr. Woodward's Sunspot (8st. 7lbs), Quinn. 1

Mr. Hari Shankar's Selim (6st 13lbs, carried 7st. 11b.), A. Wahed 2

Mr. Holland's Bahlool, (9st. 12lbs.), W. Huxley 3

Mr. Dayal Singh Chachi's Old Joe (6st. 11lbs, carried 6st 13lbs.), Lynch.. .. 4

Also Ran:—Hyrim (9st. 10lbs.), Monty (8st. 13lbs.), Thabeshir (8st. 4lbs.), Najmi (8st. 2lbs.), and Monoko (7st. 3lbs, carried 7st. 7lbs.).

Won easily by six lengths; Time.—1 min. 24 2-5 secs.

Stewards' Cup. Distance 1 mile.—

Thakore Sripal Singh's Talcum (8st. 2lbs.), Firth 1

Mr. A. Watson's Silver Memory (8st. 11b.), Quinn 2

Sirdar Jewan Singh's Menes (8st. 11lbs.), Ruiz 3

Also Ran:—Flamen (9st. 6lbs.).

Won by three-quarter length; half a length. Time.—1 min. 43 secs.

Country-Bred Cup. Distance 1 mile.—

Mr. Hameed's Hameedia (9st. 5 lbs.), Pullin 1

Thakur Sripal Singh's Hard Cash (7st. 11 lbs.), McCowan 2

Messrs. Mathradas and Goculdass' R. G. (9st. 10 lbs.), Trahan 3

Col. Cook Young's Atlanta (7st. 5 lbs.), Japheth 4

Also Ran :—Valiant (9st. 2 lbs.), Ismailia (8st. 5 lbs.), and Red Virgin (6st.).

Won by two and a quarter lengths; three-quarter length; a neck. Time.—1 min. 44 secs.

Merchants' Cup. Distance 6 furlongs.—

H. H. the Maharaja of Patiala's Sultan (9st 10 lbs.), Trahan 1

Sirdars Rachpal Singh and Sham Singh's Tagalie (7st. 3 lbs.) McCowan 2

Mr. Brigstocke's Subeh Pasha (8st.), Pullin. 3

Col. Cook Young's Searchlight II (7st. 5 lbs.), Japheth 4

Also Ran :—Sunspot (9st. 12 lbs.), British (9st. 2 lbs.), Monty (9st. 1 lb.), Lighting (9st.), Duhallow (7st. 12 lbs.), Blue Sky (7st 9 lbs.), Selim (7st.), Conqueror (6st. 7 lbs.; carried 7st. 2 lbs.), and Pharoah (6st. 4 lbs., carried 6st. 11 lbs.).

Won by one and three-quarter length; half a length separated second, third and fourth. Time.—1 min. 23 1-5 secs.

Calcutta Plate. Distance 1½ miles.

H. H. the Maharaja of Patiala's Lebanon (8st. 9 lbs.), Trahan 1

Mr. Stewart's Santa Claus (8st 12 lbs.), Quinn 2

Thakur Sripal Singh's Talcum (9st. 1 lb.), Ruiz 3

Major Sir Beaumont's Drill Mistress (9st. 13 lbs.), Owner 4

Also Ran :—Diana (7st. 2 lbs.), and Rowley Mile (6st).

Won by a neck and necks separated second, third and fourth. Time.—2 mins. 10 secs.

Stand Plate. Distance 1 mile.—

H. H. the Maharaja of Patiala's Mil (8st. 4 lbs.), Trahan 1

General Raja Hari Singh's Leila (6st. 8 lbs., carried 6st. 11 lbs.), Moosamdin 2

Mr. Stewart's Santa Claus (9st.), Quinn .. 3

Thakur Sripal Singh's Silver Memory (8st. 9 lbs.), Ruiz 4

Won by a neck; half a length; one length. Time.—1 min. 44¼ secs.

Lucknow Steeplechase. Distance 2½ miles over the steeplecase course.—

Captain Hutton's Arizona Bill (9st. 1 lb., carried 10st. 7 lbs.), Captain Bernard .. 1

Messrs. J. D. Marshall and J. D. Scott's Sholto (9st. 13 lbs. carried 11st.), Malone. 2

Meerut.

Meerut Silver Vase. Distance 6 furlongs.—

H. H. the Maharajah of Patiala's Sultan (9st. 2 lbs.), W. Huxley 1

Colonel Cook Young's Searchlight (6st. 7 lbs., carried 6st. 13 lbs.), Alford .. 2

Sirdars Sham Singh and Rachpal Singh's Tagalie (6st. 12 lbs.), Saye 3

Mr. St. Maur's Farchoud (6st. 11 lbs.), Japheth 4

Also Ran :—The Winner (10st. 4 lbs.), Sunspot (10st.), Hyrin (9st. 13 lbs.), Monty (9st. 5 lbs.), German Silver (9st. 3 lbs.), Iron Chest (9st. 2 lbs.), Duhallow (7st. 13 lbs.), Mubrook (7st. 5 lbs.), and Taiseer (7st.).

Won by a head, same. Time.—1 min. 23⅘ secs.

Cambridgeshire Plate. Distance 1¼ miles.—

Mr. P. Stewart's Santa Claus (8st. 6 lbs.), Quinn 1

H. H. the Maharaja of Patiala's Le Soleil (9st. 10 lbs.), Crowden 2

Mr. R. Newbury's Monsoon (6st. 7 lbs.), Northmore 3

Won by 1½ lengths; 6 lengths. Time—2mins. 12⅖secs.

Patiala Plate. Distance 1 mile.—

Mr. Fraser's Lady Lyric (8st. 2 lbs.), McCowan 1

Captain Hutton's Spring Daisy (9st. 5 lbs.), Captain Bernard 2

Sirdar Jiwan Singh's Mavourneen (9st. 2 lbs.), Quinn 3

Also Ran :—Amalgam (10st. 3 lbs.), Rose Lawn (9st. 6 lbs.), and Late Night (6st. 7 lbs.).

Won by 1 length; same. Time.—1min. 46⅗secs.

Stewards' Plate. Distance 1 mile.—

H. H. the Maharajah of Patiala's Housemaid (8st. 12 lbs.), W. Huxley 1

Major Walter's Red Virgin (8st. 7 lbs.), F. Northmore 2

Colonel Young's Atlanta (8st. 1 lb.), Mitchell 3

Also Ran :—Major-General (10st. 6 lbs.), Amphityren (8st. 3 lbs.), and Prince (6st., carried 6st. 10 lbs.).

Won by ½ length; 2 lengths. Time—1min. 45⅕secs.

Jodhpur Cup. Distance 2 miles over eight flights.—

Captain Hutton's Arizona Bill (9st. 9 lbs.), Captain Bernard 1

Captain J. Crawford's Bachelor's Knot (11st. 2 lbs.), Captain Malone 2

Captain Holland's Simson (10st. 8 lbs.), Owner 3

Also Ran :—H. H. (9st. 12 lbs.).

Won by 1 length; 3 lengths. Time—3mins. 59½secs.

Royal Calcutta Turf Club Plate. Distance 6 furlongs.—

Captain V. Holland's Gladiator (10st. 8 lbs.), Hayhoe 1

Maharajah of Patiala's Lavenir (9st. 3 lbs.), W. Huxley 2

Maharajah of Patiala's Flaman (9st. 4 lbs.), Crowden 3

Sirdar Jewan Singh's Menas (8st. 5 lbs.), Quinn 4

Also Ran :—Sunder (8st. 3 lbs.), Ruedisar (7st. 7 lbs.), and Bachelor's Knot (7st. 3 lbs.).

Won by 1½ lengths, ½ length. Time.—1min. 15secs.

Meerut Plate. Distance 6 furlongs.—

Mr. R. Fraser's Lady Lyric (7st., carried 7st. 1 lb.), McCowan 1

Sirdar Jewan Singh's Ormy (9st. 2 lbs.), Quinn 2

Sirdars Gyan Singh and C. Singh's Rose Lawn (9st.), S. R. Singh 3

Mr. A. Symond's Late Knight (6st. 7 lbs.), F. Northmore 4

Also Ran :—Amalgam (10st. 5 lbs.) and Gipsy King (7st. 4 lbs.).

Won by 2 lengths; 1½ length. Time.—1min. 17⅗ secs.

Gwalior.

Scindia Cup. Distance 7 furlongs.—

H. H. the Maharajah Scindia's Dress (8st. 5 lbs.) Pullin 1

Captain V. Holland's Gladiator (8st. 2 lbs.), Mitchell 2

Mr. J. Ainsworth's Mar (8st. 1 lb.), Rose .. 3

Mr. Hamer's Boss Lee (9st. 8 lbs.), Ruiz.. 4

Also Ran :—May Boy (9lbs.), Philanthropist (9st. 2 lbs.), Sun Umbrella (9st.), Talcum (8st. 1 lb.), Dunskey (7st. 12 lbs.), L'Avenir (7st. 10 lbs.), and Madrina (7st., carried 7st. 2 lbs.).

Won by 1 length; 1½ length; ½ length. Time—1min. 28⅘secs.

Bhopal Cup. Distance 1 mile.—

Mr. M. Goculdass' R. G. (8st. 9 lbs.), W. Huxley 1

Mr. M. Ghorpade's Maiden Palm (7st.), Lynch 2

Mr. Hameed's Hameed (9st. 5 lbs.), A. Templeman 3

H. H. the Maharajah of Patiala's House Maid (8st. 11 lbs.), Trahan 4

Also Ran :—Kestrel II (9st. 9 lbs.), Black Friar (8st. 8 lbs.), Sea Lad (8st. 6 lbs.), Hard Cash (8st.), and Atlanta (7st. 5 lbs.).

Won by 1½ lengths; 2 lengths; a neck. Time.—1min. 45secs.

Yuvaraj Cup. Distance 7 furlongs.—

Mr. Hamer's Short Skirt (7st. 6 lbs.), Harrison 1

Captain V. Holland's Gladiator (10st. 4 lbs.), Ruiz 2

Mr. J. Ainsworth's Margreen (9st. 13 lbs.), Rose 3

H. H. the Maharaja of Patiala's Lavenir (9st. 6 lbs.), Trahan 4

Also Ran :—Drill Mistress (9st. 7 lbs.), Andoversford (8st. 12 lbs.), Flotelle (7st. 10 lbs.), Diana (7st. 9 lbs.), Arras (7st. 7 lbs.), and Torsen (6st. 11 lbs., carried 7st.).

Won by 1½ lengths; a neck; 2 lengths. Time.—1min. 29⅖secs.

Metropolitan Plate. Distance 1¼ miles.—

H. H. the Maharaja of Patiala's Philanthropist (9st. 9 lbs.), Trahan 1

Mr. R. R. S.'s Dunskey (8st.), Collis .. 2

Mr. P. Stewart's Santa Claus (6st. 4 lbs., carried 7st.), Lynch 3

H. H. the Maharaja of Scindia's Vidi (8st. 12 lbs.), Pullen 4

Also Ran :—Wavelet's Dupe (8st.), Madrina (7st. 3 lbs., carried 7st. 4 lbs.), and Lebanon (6st. 10 lbs., carried 7st. 2 lbs.).

Won by 2 lengths; same distance separated the second, third and fourth. Time.—2mins. 10⅕secs.

Western India Turf Club Plate. Distance 5 furlongs.—

Mr. Brigstock's Subeh Pasha (8st. 7 lbs.), Pullen 1

Major H. Narayen of Cooch Behar's Ace of Diamonds (7st. 1 lb.), F. Northmore .. 2

General Raja Hari Singh's Pharoah (7st. 3 lbs., carried 7st. 4 lbs.), Harrison .. 3

Mr. Rennell's Mubrook (7st. 10 lbs.), Purtoosingh 4

Also Ran :—Bahlool (9st. 10 lbs.), Crusader (8st. 6 lbs., carried 8st. 8 lbs.), and Netal (8st. 4 lbs.).

Won by a short head; ½ length; same. Time.—1min. 9½secs.

Mathradass Goculdass' Cup. Distance 1 mile.—

Major Kushru Jang Bahadur's Amir Aswad (8st. 3 lbs.), Lynch 1

H. H. the Maharaja of Patiala's Sultan (7st. 11 lbs.), Rose 2

Mr. J. K. Irani's Creme De Menthe (8st. 3 lbs., carried 8st. 7 lbs.), Ruiz 3

Mr. Goculdass' Solar Star (9st. 1 lb.), W. Huxley 4

Also Ran :—British (9st. 3 lbs.), Angler (9st. 1 lb.), and Searchlight II (7st. 4 lbs.).

Won by ¾ length; 4 lengths; 2½ lengths. Time.—1min. 57⅕secs.

Gwalior Cup. Distance 1¼ miles.—

Maharaja of Patiala's May Boy (9st. 9lbs.), Ruiz .. .. .. } Dead heat 1
Mr. R. R. S.'s Cyanite (8st. 6lbs.), F. Templeman .. .. .. }

Mr. T. M. Goculdass' Megale (7st. 5lbs.), Rose 3

Also Ran.—Lady Muriel (9st. 3lbs.), Vidi (9st. 2lbs.), La Soliel (8st. 10lbs.), Dress (8st. 8lbs.), Talcum (7st. 11lbs.) and Seigneurie (6st. 10lbs.).

Dead heat, one and quarter lengths from Megale. Time.—2 mins. 9 1-5 secs.

Country Bred Cup. Distance 1 mile.—

Maharaja of Mysore's Maple (7st. 3lbs.), Lynch 1

Mr. R. R. S.'s Black Friar (8st. 5lbs., carried 8st. 6lbs.) Templeman 2

Maharaja of Patiala's Dick Turpin (9st. 8lbs., Ruiz 3

Mr. A. Hoyt's Discarded (8st. 3lbs.), Bombay 4

Also Ran.—R. G. (9st. 2lbs.), Black Boy (8st. 9lbs.), Hard Cash (8st. 7lbs.), Namuna (8st. 4lbs.), Atlanta (7st. 13lbs., carried 8st.), The Napper (7st. 7lbs., carried 7st. 9lbs.), and Prince (6st. 10lbs., carried 6st. 13lbs.).

Won by three-quarter length, two lengths; half length. Time.—1 min. 44 3-5 secs.

Western India Turf Club Plate. Distance 1 mile.—

Mr. St. Maur's Farchand (6st.) F. Northmore. 1

Mr. Downe's Addul (7st. 9lbs.), Japheth .. 2

General Nawabzada Obaidulla Khan's Malayeb (8st. 11lbs.), E. Huxley .. 3

Mr. R. R. S.'s Angler (8st. 7lbs.), F. Templeman 4

Also Ran.—Nizam-ul-Mulk (10st. 7lbs.), Tajilmulk (9st.), and Investment (8st. 9lbs.).

Won by two lengths same; half length. Time—1 min. 53 4-5 secs.

Central India Plate. Distance 1¼ mile.—

Mr. R. R. S.'s Cyanite (10st. 9lbs.), F. Templeman 1

Maharaja of Patiala's Glenlyon (7st.), Purtoosingh 2

General Nawabzada Obaidulla Khan's Signeurie (8st. 6lbs.), E. Huxley 3

Won by two lengths; three-quarter length. Time.—2 mins. 11 secs.

Lahore.

[*Christmas* 1916].

The Punjab Cup. Distance round course.—

Mr. Quinn Young's Top-o-the-Morning (10st 2lbs.), Quinn 1

Capt. G. M. Hulton's Cattle King (10st. 3lbs.), Capt. Barnard 2

Mr. Swainson's Mischief (10st. 3lbs.), Mr. Cornforth 3

30th Lancer's Rumour (10st. 3lbs.), Abdul. 4

Won by five lengths; fifteen lengths between second and third. Time.—3 mins. 21 secs.

The Lieut.-Governor's Cup. Distance 1 mile.—

Capt. J. Lees' Winkey (9st. 4lbs.), Jaffir .. 1

Mr. C. Quinn Young's I Will (11st.) Capt. Barnard 2

Mr. C. V. Salusbary's Bahadur (11st.), Mr. Dawson 3

Mr. McGown's Impudence (9st.), Owner .. 4

Won by a neck, Bahadur beating I will for the second place. Time.—1 min. 51 2-5 secs. ..

The Patiala Cup. Distance 5 furlongs.—

Mr. E. J. Rennelt's First Chance (8st. 11lbs.), Quinn 1

Capt. J. Lees' Birthday (9st. 7lbs.), Capt. Barnard 2

Mr. A. Symond's Bit O'Fashion (8st.), Saye 3

Won comfortably by one length, Birthday beating Ormy at the post by a short head. Time.—1 min. 4 secs.

The Merchants' Cup. Distance 6 furlongs.—

Sirdar Jevan Singh's Toyleve (9st. 11b.), Nelson 1

Mr. Quinn Young's Bonnie Blush (9st. 11b.), Capt Barnard 2

Col. Beville's Little Eva (7st. 11b.), Thakur.. 3

Won comfortably by a length; two lengths separating second and third. Time.—1 min. 17 secs.

The Mamdot Cup. Distance round course.—

Mr. Sydney Smith's Searchlight II (7st. 5lbs.), Durga 1

Mr. V. E. Holland's Duhallow (9st. 4lbs.), Owner 2

Sirdar Jewan Sing's Tagalie (8st.), Melsom.. 3

Won by a length; two lengths between second and third. Time.—3 mins. 25 4-5secs.

Rawalpindi.

Governor-General's Cup. Distance 1¼ mile.—

Messrs. Ramshaw and F. Stewart's Kestrel II (9st. 13lbs.) Quinn 1

Maharajah of Patiala's Red Duke (8st. 11lbs.), Firth 2

Mr. Beg Mahomed's Oosmania (9st. 4lbs.), Hardy 3

Maharaja of Mysore's Maple (7st. 11lbs.), Thakore 4

Also Ran.—Amphitrion (9st. 6lbs.), and Namuna (9st. 6lbs.)

Won by a short head; three-quarter length; one and a half length. Time.—1 min. 16⅕ secs.

Royal Calcutta Turf Club Plate. Distance 2¼ miles.—

Capt. Breitmeyer's H. H. (10st. 10lbs.), Mr. Drake 1

Mr. A. Symond's Kesmoldon (11st. 10lbs.), Capt. G. Walker 2

Capt. J. C. Walker's Hope Deferred (11st. 3lbs., carried 11st. 5lbs.) 3

Also Ran.—Simson (11st. 3lbs.) (fell), and Lady Stephenson (10st. 10lbs.: carried 10st. 13lbs.)

Won by three lengths; two lengths. Time—5 mins. 42 secs.

Royal Calcutta Turf Club Plate. Distance 1½ miles.—

Colonel Dosraj Urs' Lord Roberts (7st. 7lbs.), Melsom 1

Mr. A. Watson's Silver Memory (9st.), Firth 2

Sirdar Jowan Singh's Menes (8st. 12lbs.), Quinn 3

Also Ran.—Glenlyon (7st. 2lbs.), and Monsoon (7st.2lbs.).

Won by three-lengths, five lengths. Time.—2 mins. 38 secs.

Bangalore.

Maharajah of Mysore's Cup. Distance 1¼ miles.—

Mr. A. Hameed's Hameedia (9st. 5 lbs.), Huxley 1

Yuvaraja of Mysore's Tango III (8st. 5 lbs.), Purtoosingh.. 2

Messrs. E. C. Ramshaw and J. Stewart's Kestrell II (10st. 1 lbs.), J. Rose 3

Also Ran :—Mercury (8st. 8 lbs.).

Won by a length, same. Time—2 min. 22 secs.

Southern India Cup. Distance 1 mile.—

Messrs. M. Goculdass and F. M. Garda's Fire Finch (9st.), W. Northmore.. .. 1

Mr. Goculdass ' Yuan (8st. 7 lbs.), Huxley.. 2

Mr. J. L. Ainsworth's Giacomi (9st. 5 lbs.), J. Rose 3

Also Ran :—Rocking Horse (8st 8 lbs.), Melton Lass (7st. 6 lbs.), Little Star (7st. 3 lbs.), and Lord Robert (7st.).

Won by two lengths, one length between second and third. Time.—1 min. 41 secs.

The Bangalore Cup. Distance 1¼ miles.—

Mr. M. Goculdass ' Yuan (7st. 12 lbs.), Melsom 1

Mr. J. L. Ainsworth's Giacomi (8st. 7 lbs.), Rose 2

Mr. D. B. Captain's Sugar Loaf (9st. 3 lbs.), Ruiz 3

Also Ran :—Blackmailer (8st. 9 lbs.), and Lord Robert (7st. 3 lbs.),

Won by a head : half a length between second and third. Time.—2 mins. 10 4-5 secs.

The Trades ' Purse. Distance 5 furlongs.—

Mr. A. Sattar's Ismalia (9st. 13 lbs.), Huxley 1

Yuvaraj of Mysore's Namuna (7st. 6 lbs.), Purtoo Singh 2

Mr. A. R. Rangaswamy's Mercury (6st. 13 lbs.), Melsom 3

Won by one and half length ; two lengths. Time.—1 min. 5 3-5 secs.

Stewards ' Plate.—

Messrs. M. Goculdas ' and F. M. Garda's Fire Finch (10st.), Huxley 1

Mr. H. Coningham's Summurun (7st. 11lbs.), Melsom 2

Mr. J. L. Ainsworth's Margreen (8st. 7 lbs.), Rose 3

Won by a length ; three-quarters of a length.

Barrackpore.

The Gymkhana Cup. Distance 5 furlongs.—

Mr. Spencer's Anzac (12st. 3lbs.), Manley.. 1

Mr. Raikut's Pagodite (12st.), Itoo .. 2

Mr. Hannay's The Rock (7st. 3lbs.) .. 3

Also Ran :—Refund (7st. 8lbs).

Won easily by three lengths ; four lengths, Time.—1 min. 6 3-5 secs.

The Steward's Cup. Distance 6 furlongs.—

Mr. Guilford's Tallawah (9st. 10lbs.), Warke. 1

Captain Cantley's Perledale (10st.), Randall. 2

Mr. Khettry's Lady Madge (12st.), Itoo .. 3

Also Ran :—The Witch (11st. 10lbs.).

Won easily by two lengths ; four lengths between second and third. Time.—1 min. 19 2-5 secs.

STEEPLECHASING.

Tollygunge.

The Indian Grand National. Distance. 3 miles.—

Mr. Wilton Bartleet's Larrikin (9st. 4lbs.), A. Scott 1

Mr. R. Pugh's Dynevor Park (9st. 5lbs.), Barker 2

Messrs. Swan and Hilliard's Footsteps Fearless (9st. 8lbs.), Northmore 3

Mr. John Peter's Dolly Dimple (11st), Williamson 4

Also Ran :—Sesto (10st. 13lbs.), Sholto (10st 11lb., carried 10st. 5lbs.), Turbulent (9st 10lbs.), Carrick (9st. 13lbs.), and Chevalier (9st. 11lb).

Won by four lengths ; four lengths ; five lengths. Time.—6 mins. 7 3-5 secs.

The Governor's Cup. Distance about 1 mile.—

Mr. Rae's Exchange (10st. 10 lbs.), Mr. Campbell 1

Mr. Edmondson's Romantic (10st. 7 lbs.), Dr Taylor 2

Mr. Pettitt's Ladavon (9st. 7 lbs.), Mr. Sweet 3

Also Ran :—Endeavour (11st.), Longreach (10st. 8 lbs.), Kingspear (10st.), Bunny (9st. 12 lbs.), and Lill (11st. 2 lbs.).

Won by two and a half lengths; three lengths; same.

The Club Cup. Distance 5 furlongs.—

Mr. Corrie's Blackwater (10st. 10 lbs.), Mr. Tanner 1

Mr. White's Silver Lining (11st. Captain Dean 2

Mr. Pratt's Signalman (12st.), Dr. Gilford.. 3

Also Ran:—Woodpecker (10st.), and Long Reach (10st. 7 lbs.)

Won by 1¾, 3, 2½.

Tollygunge Point to Point. Distance about 1½ miles, over 7 jumps.—

Captain Durham's Magpie (10st. carried 10st. 12 lbs.), Owner 1

Mr. Henderson's Chevalier (12st.), Mr. Harvey 2

Col. Smith's Kingspear (10st.), Captain Deane 3

Also Ran :—Mystery (10st. 7 lbs.).

Won by ¾, 8.

President's Cup. Distance 1 mile.—

Mr. Edmondson's Romantic (9st. 7 lbs.), Mr. Hare 1

Mr. McCully's Longreach (10st. 6 lbs.), Captain Deane 2

Mr. Pratt's Signalman (12st.), Dr. Taylor.. 3

Won by 1, 4.

POINT-TO-POINT RACES.

Poona-Kirkee Hunt.

Light Weight Hunt Cup. Distance 3 miles.—

Mr. A. Downton's Beauty (11st. 7 lbs.), Owner 1

Captain Hunt's Sandfly (11st. 7 lbs.), Captain Malone 2

Captain Studd's Cloister (11st. 7 lbs.), Owner 3

Also Ran :—Socrates (11st. 7 lbs.), What Hope (11st. 7 lbs.), Blue Bird (11st. 7 lbs.), and Black Diamond (11st. 7 lbs.).

Pony Hunt Cup. Distance 3 miles.—

Captain Munton's Thelma (11st. 7 lbs.), Owner 1

Captain O'Donel's Mike (11st. 7 lbs.), Owner 2

Captain Warden's Hors De Combat (10st. 7 lbs.), Owner 3

Also Ran :—Treacles (10st. 7 lbs.), The.), Scamp (11st. 7 lbs.), Flexible (11st. 7 lbs and Minnie (11st. 7 lbs.).

Diana Hunt Cup. Distance about 2½ miles.—

Catch-weights.—A race for horses and ponies to be ridden by ladies.

Col. Leed's Hornpipe, Mrs. Wadia .. 1

The Hon. Mr. P. Cadell's Charles, Mrs. Lord 2

General Leader's Jeremiah, Mrs. A. Walker 3

Also Ran :—Leister, Joan, and Prudence.

Welter Hunt Cup. Distance about 3 miles.—A race for horses and ponies.

Mrs. Wadia's High Play (12st. 7 lbs.), Col. Teed 1

Mr. G. Barker's Camel (11st. 7 lbs.), Owner. 2

General James' Fleurette (12st. 7 lbs.), Captain James 3

Also Ran :—Dawn (11st. 7 lbs.), Janitor (12st. 7 lbs.), Cock Robin (11st. 7 lbs.), and Sandy (11st. 7 lbs.).

Farmers' Race. Distance 3 miles. Catch-weights.—For horses and ponies.—

Col. Teed's Captain Kidd, Owner 1

Col. Teed's Fidlers Green, Captain Malone.. 2

Captain Studd's Cloister, Owner 3

Also Ran :—Red Monk, Dugsip and Nugget.

LAWN TENNIS.

Bengal Championships.—

Men's Singles.—N. S. Iyer.

Men's Doubles—F. Boxwell and A. L. Hosie.

Mixed Doubles—Miss McNaught and Carroll.

Ladies' Singles—Miss McNaught.

Western India Championships.—

Men's Singles.—Ranga Rao.

Men's Doubles—Fyzee and Chinmulgand.

Mixed Doubles.—Mr. and Mrs. England.

Punjab Championships.—

Men's Singles—Sleem beat Jacob.

Ladies' Singles—Miss Bowde rbeat Mrs. Gracey.

Men's Doubles—Lowe and Thomas defeated Atkinson and Deane.

Mixed Doubles—Miss Bowder and Ritchie beat Bibi Amrit Kuar and Green.

G. I. P. Ry. Championships.—

Mixed Doubles—Mr. Swinhoe and Mrs. Swinhoe, Bina.

Ladies' Doubles—Mrs. Swinhoe and Mrs. Scanlan, Bina.

Men's Doubles—Mr. Cordell and Mr. Ogle, Bina.

Men's Singles—Mr. Brown, Bombay.

South Indian Tournament.—

Men's Singles—G. W. Deane, Madras.

Men's Doubles—K. P. Lakshmana Rao and D. Mahanty.

Simla Open Tournament.—

Men's Singles.—Green beat Sri Krishna 6—2, 6—2, 6—3.

Mixed Doubles.—Miss Bowder and Coates beat Mrs. Gracey and Lumsden 6—4, 6—3.

Men's Doubles.—Maharaj Singh and Green beat Coates and Thorpe 6—2, 10—8, 2—6, 6—3.

Ladies' Singles.—Miss Bowder beat Bibi Amrit Kaur 6—2, 6—0.

Poona Open Tournament.—

Singles :—Mr. Fyzee.
Doubles :—Messrs. Fyzee and Chinmulgand.
Hindu Doubles :—Messrs. Khare and Mehendale.

Open Handicap Tournament (Simla).—

Men's Singles—Mr. A. C. Gupta.
Mixed Doubles—Mrs. Fell and Mr. Booth-Graveley.

Men's Doubles—Messrs. Lumsden and Jones.

Poona Gymkhana Tournament.—

Men's Singles—Mr. Hudson.
Men's Doubles—Messrs. Windeler and Watson Smythe.
Mixed Doubles—Mr. Carr and Mrs. Stranger Leathes.

HOCKEY.

Brighton Cup (Calcutta).—

Calcutta Rangers	1 goal
Dacca Bachelors	*Nil.*

Aga Khan Cup (Bombay).—

M. A. O. College, Aligarh	2 goals
Grant Medicals, Bombay	*Nil.*

Aga Khan Cup, (Poona.)—

"A" Coy., I. D. F.	3 goals
Poona Rifles	2 goals

Elton Tournament (Bombay).—

Cathedral H. S.	3 goals
St. Mary's H. S.	*Nil.*

FOOTBALL.

Indian Challenge Shield (Calcutta).—

10th Middlesex	2 goals
Brecknochshires	*Nil.*

Harris Tournament (Poona).—

Signallers' Depot	1 goal
12th Comb. Inty. Depot	*Nil.*

Trivandrum Tournament.—

St. Joseph's H. S.	2 goals
Law College	*Nil.*

Walter Locke Cup (Rangoon).—

Y. M. C. A.	5 goals
Rangoon College	*Nil.*

Murray Cup, Lucknow.—

North Staffords	2 goals
Middlesex	*Nil.*

CRICKET.

Quadrangular Tournament, Bombay—

Resulted in a draw, Scores :—

Hindus—1st in., 252; 2nd in. *175 (7 wkts).

Parsis—1st in., 175 ; 2nd in., 193 (2 wkts).

* Innings declared closed.

GOLF.

Delhi Tournament.—

Ridge Medal, J. Teasdale.

Bernard Cup, C. W. C. Carson.

Dunlop Cup, C. W. C. Carson.

Mohawk Cup, W. Booth-Gravely.

Electic Competition, H. R. Messum.

C

Club Prize for the best medal score (36 holes), H. R. Messum.

Swinton Cup, W. Booth-Gravely.

Batchelor's Cup, J. W. Nelson.

Waller Cup, Mrs. S. C. Tomkins.

Mixed Foursomes, Mrs. Highet and Mr. R. Macpherson.

ATHLETICS.

Y. M. C. A. Meeting, Bombay.

Hundred Yards' Race.—1st Hildreth, 2nd Downes, 3rd Worseley.

Hundred and Twenty Yards' Hurdle Race.—1st Hildreth, 2nd Prescott, 3rd Brody.

Half Mile Race.—1st Cummings, 2nd Vaidya, 3rd Fritchley.

Two Hundred and Twenty Yards' Race.—1st Hildreth, 2nd Downes, 3rd Brody.

High Jump.—1st Prescott, 2nd Windsor and Hildreth, 3rd Worseley.

16 lbs. Short "Putt."—1st O'Leary, 2nd Downes, 3rd Hildreth.

Long Jump.—1st Hildreth, 2nd Prescott and Cummings, 3rd Worseley.

Quarter Mile Race.—1st Hildreth, 2nd Downes, 3rd Cummings.

One Mile Race.—1st Hildreth, 2nd Vaidya, 3rd Rossetti.

Two Mile Cycle Race.—1st Evans, 2nd O'Neill.

All India Meeting, Bombay:—

100 Yards Flat Race.—1, Hildreth (Bombay Y. M. C. A.); 2, Mainwood (2nd N. Staffs, R'pindi); 3. Boult, B. S. School Old Boys, Igatpuri. Time—10 3-5 secs.

Half Mile Flat Race.—1, Smith; 2, Reid (both 2nd N. Staffs). 3, Guddard (Igatpuri). Time.—2 mins. 13 4-5 secs.

100 Yards Bombay City School Boys.—1, Ismail (Cathedral High School); 2, Palia; 3, Vaidya, (both Robert Money School). Time.—12 3-5 secs.

120 Yards Hurdle Race.—1, Hildreth; 2. Brodie (Y. M. C. A.); 3, Boult (Igatpuri), Time—16 secs.

High Jump.—1, Prescott (Y. M. C. A.); 2, Kalapesee (St. Xavier's Coll.); 3, Morris (H. M. Customs). Height 5ft. 4in.

Two-Mile Cycle Race.—1, B. J. Evans (Y. M. C. A.); 2, Jani (Bombay High School); 3, Shaike (Deccan Gym., Poona). Time—6 min. 28 secs.

Quarter-Mile Flat Race.—1, Smith; 2, Hildreth; 3, Powell (Rangers). Time—52 2-5 secs. This a record for this meeting.

Broad Jump.—1, Hildreth; 2, Pte. Eccles (War Hospital, Poona); 3, Boult. Distance 17ft. 7 5-8 in.

220 Yards Flat Race.—1, Hildreth; 2, Brown (2nd N. Staffs); 3, Mainwood. Time—24 3-5 secs.

One Mile Flat Race.—1, Reid; 2, Smith; 3. Bhat (Bombay). Time—5 mins. 5 1-5 secs.

WIRELESS TELEGRAPHY.

The annual report of the Indian Telegraph Department for 1915-16 states that the number of wireless stations in India and Burma has increased from 9 in 1910-11 to 19 in 1915-16. The number of messages dealt with in the latter year by the nine coast stations was 83,719.

Licences to Officers.—The Government of India have decided that the granting of licences to military officers in respect of wireless telegraph apparatus used for experimental purposes shall be regulated by the following general principles: (1) When an officer conducts experiments in wireless telegraphy in his official capacity at the expense of Government no licence is required, but only executive permission, which may be given so far as the Telegraph Department is concerned by the Director-General, Posts and Telegraphs.

(2) When an officer carries on experiments as a private individual at his own expense, he must obtain a licence. If the approval of the military authorities is required to what he proposes to do, he should obtain such approval before the Director-General, Posts and Telegraphs, is approached. The licence will then be submitted by the Director-General, Posts and Telegraphs, for the sanction of the Government of India.

(3) With reference to the above, attention is drawn to the necessity for applying for licences to own and use wireless telegraphy apparatus or installations, experimental or otherwise. Applications for such licences will be submitted through the Chief of the General Staff and will contain particulars regarding the apparatus showing (*a*) system it is proposed to employ, (*b*) maximum range of signalling with applicant's own receiving apparatus, (*c*) power (current and voltage), (*d*) source of power.

Chronicle of the year 1917.

JANUARY.

1st.—Indian New Year Honours List contained seven appointments to K.C.S.I., two C.S.I., three K.C.I.E., 20 C.I.E. The Imperial Order of the Crown of India was granted to Lady Willingdon, wife of H. E. the Governor of Bombay. The Gold Medal of the Kaiser-i-Hind had ten recipients and the Silver Medal 20.

Reductions in the passengers services on the Indian Railways in order to conserve material, owing to the impossibility of making the usual replacements during war time, announced.

2nd.—Indian Industrial Commi sion resumed sittings in Calcutta after the seasonal holidays.

3rd.—Judgment pronounced by Special Tribunal in Lahore Conspiracy Case concerning the operations of conspirators in South America and the Punjab. Of the eighteen accused persons, five were sentenced to death, one to transportation for life, one to imprisonment for life with recommendation for mercy, three to imprisonment for life, another to two year's imprisonment, while five were given the benefit of a doubt and acquitted.

6th.—Annual Convocation of the Calcutta University, H. E. the Viceroy, Chancellor, presiding.

8th.—P. W. D. Re-organization Committee opened its inquiry at the Secretariat, Bombay, Mr. F. G. Sly presiding. The Chairman, outlining task before Committee, said two possible lines of advance w.re indicated by Government of India, first being substitution of private contracts for Government agency, second being encouragement of growth of public works branches of local bodies, urban and rural, so as to make them independent of assistance of P. W. D., and further to consider organisation and procedure of P. W. D. itself.

9th.—Governor of Bombay and Lady Willingdon arrived on board H. M. S. Northbrooke at Karachi on tour.

10th.—Fourth Session, Indian Science Congress, opened in Bangalore by Maharaja of Mysore, Sir Alfred G. Bourne presiding.

18th.—Officially announced in Simla that as result of negotiations between Government of India and Secretary of State it had been decided to raise special War Loan in India, whole amount to be given to H. M.'s Government to assist in prosecution of war.

19th.—Obituary: Earl of Elgin, ex-Viceroy and Governor-General of India.

21st.—Obituary: Hon'ble Mr. W. H. Sharp, Director of Public Instruction, Bombay.

22nd.—Officially announced that Secretary of State with aid of Governor-General-in-Council had selected Sir James Meston, Lieutenant-Governor of United Provinces, & Sir Satyendra Prasanna Sinha, to represent British India at forthcoming special sittings of Imperial War Cabinet, and H. H. Maharaja of Bikaner to represent Ruling Chiefs of India.

Conference of Directors of Public Instruction from all parts of India opened in Delhi.

25th.—Report of Royal Commission on Public Services in India published. It consisted, with appendices and reports of evidence, of twenty volumes and main report, with annexures and minutes by individual Commi sioners, filled volume of 529 printed pages of foolscap.

26th.—Governor of Bombay laid Foundation Stone of new building of Victoria Jubilee Technical Institution at Matunga, Bombay.

30th.—Obituary: Earl of Cromer, at one time Finance Member of Council of Viceroy of India.

FEBRUARY.

4th.—Government of India announced they had decided to utili e immediately services of Sir Thomas Holland, Chairman of Indian Industrial Commi sion, for purpose of organising provi ion of war supplies from India, usi g more fully local sources for both civil and military requirements and undertaking development of indigenous industries in view of war conditions.

7th.—Imperial Legislative Council met at Delhi. Viceroy opened proceedings with very lengthy and important speech regarding Indian co-operation in prosecution of war, impressing upon Honourable Members that appointment of Indian Representatives to War Cabinet of Empire marked point in history of India which, although it might not be seen in its true perspective to-day, would be beginning of new chapter in India's history under Imperial Flag.

9th.—Sir James Meston, Hon. Sir S. P. Sinha and Maharaja of Bikaner entertained at Garden Party in Bombay by Indian Merchants Chamber and Bureau.

11th.—Maharaja of Bikaner entertained at Banquet at Taj Mahal Hotel, Bombay, by many of his brother Ruling Princes on eve of departure to attend Imperial War Cabinet. Governor presided and speeches of high political import were made by Maharajas of Patiala, Alwar and Bikaner.

15th.—British troops on Tigris front took offensive in Dahra Bend on right bank of Tigris immediately west of Kut-al-Amara and completely obtained all their objectives and captured large number of prisoners with machine-guns and stores.

21st.—Commander-in-Chief (Sir C. Monro) introduced Indian Defence Force Bill in Imperial Legislative Council, Delhi.

23rd.—Governor of Bombay and Lady Willingdon arrived in Baroda on visit to the Gaekwar.

H. M. the King Emperor opened new School of Oriental Studies, in London.

26th.—General Maude reported capture of whole Turkish positions from Sannaiyat to Kutel-Amara, Kut passing automatically into our hands, surrender of large number of Turks and precipitate retreat of remainder of Turkish Army in direction of Baghdad.

29th.—Indian Defence Force Bill passed into law by Viceroy's Legislative Council.

MARCH.

1st.—Hon. Sir William Meyer introduced *Annual Budget* in Viceroy's Council, Delhi, showing Imperial surplus of £5,738,000 and Provincial surplus of £1,561,000 and proposing £100 millions war loan, involving new annual war contribution of £6 millions and announcing new super-tax on big incomes, additional export tax on jute, additional import tax on cotton goods and surcharge on railway goods traffic, these new taxes being estimated to yield £3,350,000 in ensuing year.

General Maude reported remnants of Turks on Tigris to north of Baghdad in disorderly flight. Total number of Turks killed and wounded estimated at 20,000, while large number of prisoners and great quantities of guns and stores captured.

4th.—Governor-General of Portuguese India and Madame Conceiro da Costa, his wife, arrived in Bombay on official visit to Governor and Lady Willingdon.

5th.—Governor presided over great meeting of Bombay citizens in Town Hall to inaugurate campaign for promotion of contributions to War Loan.

Viceroy received deputation of Press Association of India at Delhi and, addressing them, exposing the hollowness of their general criticisms of administration of Press Act, vigorously exhorted Press in India to purge itself of its intemperate methods, so as to hasten time when it could once more be accorded the freedom which should be its pride no less its privilege.

10th.—Officially announced in Delhi that Nizam of Hyderabad had given £100,000 to Admiralty towards anti-submarine campaign.

11th.—Officially announced that Hon. Sir Harcourt Butler will succeed Sir James Meston as Lieutenant-Governor of United Provinces and that Hon. Sir Reginald Craddock, Home Member of Government of India, will become Lieutenant-Governor of Burma in succession to Sir Harcourt Butler.

General Maude's forces, after vigorous pursuit of Turks from Kut, occupied Baghdad.

13th.—Bombay Legislative Council, at Bombay: Budget introduced.

14th.—Death announced of H. R. H. Duchess of Connaught.

House of Commons passed resolution authorising India's contribution of £100 millions sterling to be expended towards war and made debate occasion of numerous tributes to Indian co-operation with rest of Empire in this hour of crisis.

17th—Governor of Bengal, Lord Carmichael, received numerous addresses of farewell prior to departure on retirement.

H. E. Lady Chelmsford opened a new block of the Lady Hardinge Hospital in Delhi.

22nd.—Bombay Chamber of Commerce annual meeting.

Imperial Legislative Council: Delhi Session ends.

23rd.—General Maude reported occupation of Turkish positions between Baghdad and passes into Persia, up to and including Shahroban.

26th.—Earl of Ronaldshay, new Governor of Bengal, accompanied by Countess of Ronaldshay, arrived Calcutta and took over charge from Lord Carmichael, who left for Bombay same evening.

30th.—Governor of Bombay opened Parsik Tunnel beyond Thana, outside Bombay, being last link to be completed in quadrupling of main lines between Kalyan and Bombay.

Lord Carmichael left Bombay for England on his retirement.

APRIL.

6th.—British and Russian forces established touch at the Turkish front near the Persian frontier.

10th.—Bombay Millowners' Association annual meeting: it was announced that Bombay Millowners had contributed Rs. 80 lakhs to war loan. Hon. Sir D. E. Wacha elected Chairman.

30th.—Lt. the Hon. Frederick Thesiger, R.F.A., elder son of T. E. Viceroy and Lady Chelmsford, killed in action near Baghdad.

MAY.

9th.—British railway service opened between Baghdad and Samara.

16th.—Queen Mary Technical School for Disabled Indian Soldiers opened at Bombay, object of school being to give suitable technical education to disabled soldiers to enable them profitably to utilise their future years.

24th.—Empire Day celebrated throughout India.

31st.—H. H. the Maharaja of Bikaner, Sir James Meston and Sir S. P. Sinha, Indian Delegates to the Imperial War Conference reached Bombay on their return to India.

JUNE.

3rd.—Indian Birthday Honours List. Brigadier-General T. E. Scott, Military Secretary to H. E. the Commander-in-Chief and Lt.-Col C. A. Johnston, I.M.S., to be C.B., H. H. the Rao of Cutch to be G.C.S.I., and Sir C. E. Fox, Chief Judge, Chief Court, Lower Burma to be K.C.S.I. Eight appointments to C.S.I. Sir M. F. O'Dwyer, Lieutenant-Governor of the Punjab, Lt.-Col. Sir G. O. Roos Keppel, Chief Commissioner, N.W.F.P., and the Prince of Arcot to be G.C.I.E. Six K.C.I.E. and 33 C.I.E. Eight Knighthoods.

11th.—An official account of the progress made in the organisation of the Indian Defence Force issued in Simla stated that—"It is not desirable for military reasons to announce the numbers in each class but the reports of inspecting officers enable it to be said that in the short period of 3 months that has elapsed since the Act came in to operation the latter has provided a force of great military potentiality."

15th.—Last day for subscriptions to War Loan. Special efforts to increase the final contributions took place in various parts of India.

The Government of Madras in a Press Communique defined their attitude towards current political discussions as one of practical sympathy with natural aspirations of Indians to bear larger part of burden of public administration and with their constitutional and educative efforts to attain self-government, but condemning strongly advocacy of establishment of complete autonomy for India at close of war in terms which deny or wholly ignore possibility of successive steps in its development and also condemning practice of some speakers and writers to resort to unscrupulous attacks and insidious calumnies upon existing administration, to disregard altogether principles of fair and honest criticism and to attempt to persuade the ignorant that for all ills and hardships of life obvious and easily attainable remedy is to sweep away present system of Government.

16th.—The Madras Government issued orders for the interment of Mrs. Anne Besant, Mr. G. S. Arundale and Mr. B. P. Wadia.

18th.—Agricultural Educational Conference summoned by Agricultural Department of Government of India met in Simla, Sir Claude Hill presiding.

23rd.—Annual review of irrigation in India, covering 1915-16, published in Simla, showing total area irrigated by productive works 16,630,600 acres of which 7·3 millions in Punjab and 3·5 millions in Madras, highest return being obtained from Madras, namely 13.55 per cent., and average return for All-India being 8·14 per cent.

26th.—P. & O. s.s. Mongolia, carrying mails from London, sunk by mine outside Bombay Harbour.

27th.—Annual Meeting of St. John Ambulance Association in Simla. Sir Pardey Lukis, Director-General of Medical Services, showed that cost of meeting demands of Mesopotamia, which Joint War Committee of Red-Cross and St. John Ambulance Association now undertook, came approximately to two lakhs a month, in addition to which Rs. 90,000 was sent in cash during last six months.

28th.—Obituary: Sir George Birdwood.

29th.—Secretary of State for India informed Government of India that weekly mail service to Egypt, India, Ceylon and Far-East, which was made into fortnightly service on account of submarine activity, would be resumed from next week.

30th.—Bombay Educational Conference under Presidency of Sir Narayan Chandavarkar opened in University Hall, Bombay.

JULY.

1st.—Obituary: Mr. Dadabhoy Naoroji.

4th.—Western India Turf Club War Loan Lottery drawing commenced, highest prize for the day being Rs. 72,845.

5th.—Western India Turf Club Lottery, First prize, value Rs. 7,28,420, drawn by Mr. Soloman Nissim of Singapore. Second prize (Rs. 3,64,210), and third prize (Rs. 1,82,000) also drawn.

6th.—Governor of Bombay inaugurated Bhandarkar Oriental Research Institute, Poona, for post-graduate study, building for it being in course of construction.

9th.—Conference in Simla of Provincial Secretaries of Advisory Committees for Indian Students going to England.

10th.—Hon. Sir George Barnes, Member for Commerce and Industry met Bombay Chamber of Commerce, and Bombay Indian Merchants' Chamber and Bureau.

Sir Stanley Maude's despatch, as General Commanding Mesopotamia Expeditionary Force, covering seven months ended 31st March, issued in London. Despatch showed that period was equally divided between preparations and subsequent operations leading to fall of Baghdad. Sir Stanley paid warm tribute to splendid spirit and gallantry of British and Indian troops and brilliant activity of the co-operating naval contingent.

12th.—Rt. Hon. Mr. Austin Chamberlain resigned post of Secretary of State for India as result of criticisms contained in Mesopotamia Commission's Report.

17th.—Officially announced that Mr. E. S. Montagu appointed Secretary of State for India.

18th.—Strike of 5,000 workmen at G. I. P. Railway Locomotive Workshops, Parel, Bombay.

24th.—Bombay Legislative Council, Poona: Revised Budget presented.

27th.—First Bombay Local Self-Government Conference opened in Poona, Governor making inaugural speech.

28th.—All-India Congress Committee and Council of All-India Moslem League met in Conference in Presidency Association Rooms, Bombay, and passed various resolutions regarding political reform.

29th.—Communique issued by Government of India explaining comprehensive scheme of delegation of financial powers drawn up by Government on basis of Decentralisation Commission's Report.

AUGUST.

2nd.—Report of Mesopotamia Commission published in *Times of India*, with full text of Lord Hardinge's speech in House of Lords replying to Commission's criticisms on Government of India.

4th.—Third anniversary of outbreak of war between England and Germany observed throughout India as day for special intercession for victory and peace.

10th.—Special Order of the day by Commander-in-Chief announced conclusion of Mahsud operations, dispersion to their stations of Waziristan Field Force, final jirga of 3,000 Mahsuds having met on 10th confirming settlement previously arranged and taking usual oath of peace. The order paid warm tribute to General-in-Command of expedition and to pluck and determination evinced by troops combatant and non-combatant, British and Indian, to the Frontier Militia and to our gallant Allies, the Nepalese Contingent.

11th.—Sir Benjamin Robertson in Durbar at Amraoti made important speech on need of concentrating upon war work, condemned mischievous political agitation and directed his hearers to matters of general welfare, especially improvement of education and agriculture.

13th.—Collision between British troop train and goods train on G. I. P. Railway at Yermarras, near Raichur, five British soldiers being killed, five British and two Indian officers and 30 British and one Indian rank and file injured.

18th.—Government of India in letter to all Chambers of Commerce expressed grave concern at prevalent adulteration of produce before export, explained action already officially taken and inquired whether in opinion of Chambers any practical measures could be taken to remedy evil.

15th.—H. H. Aga Khan published in *London Times* scheme of political reform for India prepared by late Mr. G. K. Gokhale few days before his death and entrusted by him to Aga Khan with discretion to select time for publication. Mr. Gokhale planned scheme of provincial autonomy, by which each Province would have Governor appointed from England, with Executive Council of three English and three Indian Members and with Legislature numbering from 75 to 100, four-fifths of whom to be elected by different constituencies and interests.

20th.—*Gazette of India Extraordinary* announced that Mr. Montagu, Secretary of State for India, had accepted Viceroy's invitation to visit India to discuss political reforms with Viceroy and Government of India, the Local Governments and other public bodies.

21st.—Bombay University annual convocation. H. E. the Governor, as Chancellor, and Vice-Chancellor, Mr. C. H. Setalvad, both delivered addresses.

23rd.—Public meeting at Bombay Town Hall to take preliminary measures for raising memorial to memory of late Mr. Dadabhoy Naoroji.

26th.—Hon. Saheb Zada Aftab Ahmed Khan, newly appointed Member of India Council, entertained in Bombay prior to his departure to England.

SEPTEMBER.

1st.—Report of London Inter-Allied Emigration Conference on emigration from India published with covering resolutions by Government of India for public information and criticism, main points being decision by His Majesty's Government that Indentured Emigration shall not be re-opened and that no free emigrants can be introduced into any Colony until all the Indian emigrants already there have been released from existing indentures.

5th.—Imperial Legislative Council, Simla. H. E. the Viceroy delivered what is regarded as longest speech ever made by a Viceroy on similar occasion and made important pronouncement regarding constitutional reform in India saying that His Majesty's Government and Government of India had agreed upon policy according to which three roads lead to the goal. First was in domain of local self-government, village or town municipal council; second in more responsible employment of Indians under Government; and third in domain of Legislative Councils, along which advance must be made simultaneously with advances in other two. His Majesty's Government had decided that substantial steps should be taken as soon as possible.

8th.—H. E. Lady Chelmsford presided over crowded ladies' meeting in Gaiety Theatre, Simla, for purpose of organising work by women in connection with war.

12th.—Imperial Legislative Council. Bill to give additional powers to courts to deal with usurious loans of money or grain introduced. Bill to amend Savings Banks Act so as to increase permissible limit of individual savings bank deposits introduced.

13th.—Imperial Legislative Council. Select Committee's report on Patna University Bill adopted and Bill passed. Non-official resolution recommending that Punjab legislative and administrative system be assimilated to that of Bihar and Orissa led to striking speech by H. H. Lieutenant-Governor of Punjab (Sir Michael O'Dwyer) in which he declared that Punjab did not require proposed changes and cited Province's immense response to His Majesty's call for soldiers as example of happy co-operation between Government and people already prevailing there, comparing state of Punjab in this respect with preaching of pernicious doctrines by prominent politicians in other Provinces.

15th.—Official announcement issued in Simla of appointment by Government of India of Commission to inquire into condition and prospects of Calcutta University and consider question of constructive policy in regard thereto.

18th.—Bombay Provincial Co-operative Conference, Poona. H. E. Governor presided and opened proceedings with warmly encouraging speech.

Mrs. Annie Besant and her associates released from internment at Coimbatore.

19th.—Imperial Legislative Council. Bill to amend Paper Currency Act, to authorise introduction of notes of denominations lower than Rs. 5, introduced and passed, also Bills to restrict transfer of ships registered in British India and to amend Indian Trust Act. Resolution regarding amendment of system of Government in Punjab further discussed and withdrawn.

20th and 21st.—Imperial Legislative Council: Non-official resolutions.

23rd.—Sir Harcourt Butler left Rangoon for England on concluding his Lieutenant-Governorship of Burma, Hon. Mr. Rice temporarily assuming charge.

24th and 25th.—Imperial Legislative Council. Non-official resolutions.

26th.—Imperial Legislative Council. Official Bill to provide for acquisition of gold imported into British India, Presidency Small Cause Court Act Amendment Bill and some minor measures passed.

OCTOBER.

1st.—Lt.-Gen. Sir Stanley Maude reported successful operations against Turkish position at Ramadie, on Euphrates, westward of Baghdad, resulting in capture of Turkish Commander, Ahmed Beg, and staff, 4,000 prisoners, 13 guns and 12 machine-guns.

10th.—Bombay Legislative Council. Whole day spent in discussion of private Bill introduced by Hon. Mr. V. J. Patel providing for elective majority in constitution of Bombay Medical Council.

11th.—Bombay Legislative Council. After further prolonged discussion Medical Act Amendment Bill thrown out. Amendment of rules for conduct of business as recommended by Select Committee discussed.

14th.—Bombay Legislative Council. Non-official resolutions.

21st.—Announced in Simla that Government of India had addressed long communication to local Governments on recommendations of Public Service Commission regarding Indian Educational and Provincial Educational Services main object of Government being to obtain views of Provinces regarding fundamental principles on which Department should be re-organised.

22nd.—Viceroy reached Quetta on tour.

29th.—Viceroy visited Karachi.

NOVEMBER.

5th.—Official statement issued to London Press dealing with India's assistance in war in men, money, food and material, special section being devoted to help given by Ruling Princes and Chiefs.

8th.—News published of launch in Bombay by Tata Sons and Co. of scheme for creation of new Industrial Bank with authorised capital of six crores.

9th.—Banquet in Delhi by Ruling Princes to Sir James Meston, Maharaja of Bikaner and Sir S. P. Sinha, Indian Deputation to Imperial War Cabinet.

Rt. Hon. E. S. Montagu, Secretary of State for India, arrived in Bombay from England for tour of inquiry regarding constitutional reform, his party including Lord Donoughmore, Mr. C. H. Roberts, M.P.; Sir William Duke, Member of Council of India; Mr. M. C. Seton, Secretary, Judicial and Public Departments, India Office, Mr. Kisch, Private Secretary, and Mr. Parsons, Assistant Private Secretary. Party left fort Delhi by night train.

12th.—Secretary of State reached Delhi.

13th. Indian Industrial Commission opened Bombay sessions.

18th.—Lieutenant-General Sir Stanley Maude, Commander-in-Chief in Mesopotamia, died from cholera after short illness.

26th.—Bombay Exhibition of Food and Household Requisites of Indian production and Fancy Fair, main object of both being to show to householders how many necessities of life can be produced in India and to raise funds for Women's Branch, Bombay Presidency War and Relief Fund, under whose auspices undertaking was organised, opened by H. E. the Governor.

Joint Deputation of Indian National Congress and All-India Moslem League waited on Viceroy and Secretary of State in Delhi to present memorial regarding political reforms.

DECEMBER.

3rd.—Bombay Legislative Council. Discussion on Second Reading of Hon. V. J. Patel's Bill to provide for extension of primary education in Municipal Districts other than Bombay City.

4th—Bombay Legislative Council. Hon. Mr. Patel's Bill further discussed and passed. Non-official resolutions.

Annual Quadrangular Cricket Tournament opened in Bombay.

5th.—Bombay Cricket Tournament. Hindus win against Mahomedans by five wickets.

6th.—General Marshall (appointed to succeed Sir Stanley Maude in Mesopotamia) reported successful operations against Turks on Jebel Hamrin Ridge, as a result of which British occupied Sukaltutan Pass, through which road from Upper Diala region proceeds north.

7th.—Bombay Legislative Council. Non-official resolutions.

8th.—Bombay Cricket Tournament. Parsis win against Presidency by seven wickets.

9th.—Governor of Bombay opened new Willingdon Sports Clubs opposite Bombay Race Course, organisation of which was initiated by His Excellency to provide club where all communities may meet on lines of Ranelagh and Hurlingham.

10th.—Governor of Bombay opened 10th Indian Agricultural Conference at Poona.

12th.—Bombay Cricket Tournament resulted in draw between Hindus and Parsis, Hindus in first innings making 252 and Parsis in first inning 175 while Hindus declared their second innings closed at 175 after fall of 7 wickets and Parsis in their second innings scored 193 for two wickets before stumps were drawn.

"Our Day" celebrated with great success throughout India, its object being to raise money for various war funds.

24th.—Viceroy and Secretary of State reached Bombay, this being Lord Chelmsford's first visit to city since his arrival in India. Viceregal visit was private except as regards reception with Mr. Montagu of addresses from various public bodies on subject of political reform.

26th.—National Congress opened in Calcutta, Mrs. Annie Bessant presiding.

30th.—Annual Sessions of Industrial Conference and All-India Moslem League, Calcutta.

INTEREST TABLE.

From 5 to 12 per cent. on Rupees 100.

Calculated for 1 *Year*, 1 *Month* (*Calendar*), 1 *Week*, *and* 1 *Day* (365 *Days to Year*), *the Decimal Fraction of a Pie for the Day being shown for the Day.*

Per cent.	1 *Day.*	1 *Week.*	1 *Month.*	1 *Year.*
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
5	0 0 2·630	0 1 6	0 6 8	5 0 0
6	0 0 3·156	0 1 10	0 8 0	6 0 0
7	0 0 3·682	0 2 1	0 9 4	7 0 0
8	0 0 4·208	0 2 5	0 10 8	8 0 0
9	0 0 4·734	0 2 9	0 12 0	9 0 0
10	0 0 5·260	0 3 0	0 13 4	10 0 0
11	0 0 5·786	0 3 4	0 14 8	11 0 0
12	0 0 6·312	0 3 8	1 0 0	12 0 0

Table of Exchange, No. 1—Rupees into Pounds Sterling.

For values of Rupees from 1s. $3\frac{1}{2}$*d. to* 1s. $3\frac{11}{16}$*d.*

Rupees.	1s. $3\frac{1}{2}$d.	1s. $3\frac{5}{16}$d.	1s. $3\frac{3}{8}$d.	1s. $3\frac{7}{16}$d.	1s. $3\frac{1}{2}$d.	1s. $3\frac{9}{16}$d.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1	0 1 $3\frac{1}{2}$	0 1 $3\frac{5}{8}$	0 1 $3\frac{3}{4}$	0 1 $3\frac{7}{8}$	0 1 4	0 1 $4\frac{1}{8}$
3	0 3 $10\frac{1}{2}$	0 3 $10\frac{7}{8}$	0 3 $11\frac{1}{4}$	0 3 11	0 3 $11\frac{3}{4}$	0 3 $12\frac{1}{8}$
5	0 6 $5\frac{1}{2}$	0 6 $5\frac{3}{4}$	0 6 6	0 6 $6\frac{1}{4}$	0 6 $6\frac{3}{4}$	0 6 7
10	0 12 11	0 12 $11\frac{1}{2}$	0 13 0	0 13 $0\frac{1}{2}$	0 13 $1\frac{1}{2}$	0 13 2
20	1 5 10	1 5 $11\frac{1}{2}$	1 6 $0\frac{1}{4}$	1 6 $1\frac{3}{4}$	1 6 3	1 6 $4\frac{1}{4}$
30	1 18 9	1 18 $10\frac{3}{8}$	1 19 $0\frac{3}{4}$	1 19 $2\frac{1}{4}$	1 19 $4\frac{1}{2}$	1 19 $6\frac{1}{4}$
40	2 11 8	2 11 $10\frac{1}{2}$	2 12 1	2 12 $3\frac{1}{4}$	2 12 6	2 12 $8\frac{1}{4}$
50	3 4 7	3 4 10	3 5 $1\frac{1}{4}$	3 5 $4\frac{1}{4}$	3 5 $7\frac{1}{2}$	3 5 $10\frac{1}{2}$
60	3 17 6	3 17 $9\frac{3}{4}$	3 18 $1\frac{3}{4}$	3 18 $5\frac{1}{4}$	3 18 9	3 19 $0\frac{3}{4}$
70	4 10 5	4 10 $9\frac{1}{4}$	4 11 $1\frac{1}{2}$	4 11 6	4 11 $10\frac{1}{2}$	4 12 $2\frac{1}{4}$
80	5 3 4	5 3 9	5 4 2	5 4 7	5 5 0	5 5 5
90	5 16 3	5 16 $8\frac{1}{4}$	5 17 $2\frac{1}{4}$	5 17 $7\frac{3}{4}$	5 18 $1\frac{1}{2}$	5 18 7
100	6 9 2	6 9 $8\frac{1}{4}$	6 10 $2\frac{1}{4}$	6 10 $8\frac{3}{4}$	6 11 3	6 11 $9\frac{1}{4}$
250	16 2 11	16 4 $2\frac{3}{4}$	16 5 $6\frac{1}{4}$	16 6 $9\frac{3}{4}$	16 8 $1\frac{1}{2}$	16 9 5
400	25 16 8	25 18 9	26 0 10	26 2 11	26 5 0	26 7 1
500	32 5 10	32 8 $5\frac{1}{4}$	32 11 $0\frac{3}{4}$	32 13 $7\frac{3}{4}$	32 16 3	32 18 $10\frac{1}{4}$
750	48 8 9	48 12 $7\frac{3}{4}$	48 16 $6\frac{1}{4}$	49 0 $5\frac{1}{4}$	49 4 $4\frac{1}{2}$	49 8 $3\frac{1}{4}$
1,000	64 11 8	64 16 $10\frac{1}{2}$	65 2 1	65 7 $3\frac{1}{2}$	65 12 6	65 17 $8\frac{1}{2}$

For values of Rupees from 1s. $3\frac{7}{8}$*d. to* 1s. $4\frac{1}{16}$*d.*

Rupees.	1s. $3\frac{7}{8}$d.	1s. $3\frac{15}{16}$d.	1s. $3\frac{31}{32}$d.	1s. 4d.	1s. $4\frac{1}{32}$d.	1s. $4\frac{1}{16}$d.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1	0 1 $3\frac{3}{4}$	0 1 $3\frac{7}{8}$	0 1 4	0 1 4	0 1 4	0 1 4
3	0 3 $11\frac{1}{4}$	0 3 $11\frac{3}{4}$	0 3 $11\frac{7}{8}$	0 4 0	0 4 0	0 4 0
5	0 6 $7\frac{1}{2}$	0 6 $7\frac{3}{4}$	0 6 $7\frac{7}{8}$	0 6 8	0 6 8	0 6 $8\frac{1}{2}$
10	0 13 $2\frac{3}{4}$	0 13 $3\frac{1}{4}$	0 13 $3\frac{3}{4}$	0 13 4	0 13 $4\frac{1}{4}$	0 13 $4\frac{1}{2}$
20	1 6 $5\frac{1}{2}$	1 6 $6\frac{3}{4}$	1 6 $7\frac{1}{4}$	1 6 8	1 6 $8\frac{1}{4}$	1 6 $9\frac{1}{2}$
30	1 19 $8\frac{1}{4}$	1 19 10	1 19 11	2 0 0	2 0 $0\frac{1}{4}$	2 0 $1\frac{1}{2}$
40	2 12 11	2 13 $1\frac{1}{2}$	2 13 $2\frac{1}{2}$	2 13 4	2 13 $5\frac{1}{4}$	2 12 $6\frac{1}{2}$
50	3 6 $1\frac{3}{4}$	3 6 $4\frac{1}{2}$	3 6 $6\frac{1}{4}$	3 6 8	3 6 $9\frac{1}{4}$	3 6 11
60	3 19 $4\frac{1}{2}$	3 19 $8\frac{1}{4}$	3 19 10	4 0 0	4 0 $1\frac{3}{4}$	4 0 $3\frac{1}{2}$
70	4 12 $7\frac{1}{4}$	4 12 $11\frac{1}{2}$	4 13 $1\frac{3}{4}$	4 13 4	4 13 6	4 13 $8\frac{1}{4}$
80	5 5 10	5 6 3	5 6 $5\frac{1}{2}$	5 6 8	5 6 $10\frac{1}{4}$	5 7 1
90	5 19 $0\frac{3}{4}$	5 19 $6\frac{1}{2}$	5 19 9	6 0 0	6 0 $2\frac{3}{4}$	6 0 $5\frac{1}{2}$
100	6 12 $3\frac{1}{4}$	6 12 $9\frac{3}{4}$	6 13 $0\frac{1}{4}$	6 13 4	6 13 7	6 13 $10\frac{1}{4}$
250	16 10 $8\frac{3}{4}$	16 12 $0\frac{1}{4}$	16 12 8	16 13 4	16 13 $11\frac{3}{4}$	16 14 $7\frac{1}{2}$
400	26 9 2	26 11 3	26 12 $3\frac{1}{2}$	26 13 4	26 14 $4\frac{1}{2}$	26 15 5
500	33 1 $5\frac{1}{4}$	33 4 $0\frac{3}{4}$	33 5 $4\frac{1}{4}$	33 6 8	33 7 $11\frac{1}{2}$	33 9 $3\frac{1}{2}$
750	49 12 $2\frac{1}{4}$	49 16 1	49 18 $0\frac{1}{4}$	50 0 0	50 1 $11\frac{1}{4}$	50 3 $10\frac{1}{2}$
1,000	66 2 11	66 8 $1\frac{1}{4}$	66 10 $8\frac{3}{4}$	66 13 4	66 15 $11\frac{1}{4}$	66 18 $6\frac{1}{2}$

For values of Rupees from 1s. $4\frac{3}{32}$*d. to* 1s. $4\frac{1}{4}$*d.*

Rupees.	1s. $4\frac{3}{32}$d.	1s. $4\frac{1}{8}$d.	1s. $4\frac{5}{32}$d.	1s. $4\frac{3}{16}$d.	1s. $4\frac{7}{32}$d.	1s. $4\frac{1}{4}$d.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1	0 1 4	0 1 4	0 1 4	0 1 4	0 1 4	0 1 $4\frac{1}{2}$
3	0 4 $0\frac{1}{4}$	0 4 $0\frac{1}{2}$	0 4 $0\frac{1}{4}$	0 4 $0\frac{1}{2}$	0 4 $0\frac{1}{2}$	0 4 $0\frac{3}{4}$
5	0 6 $8\frac{1}{4}$	0 6 $8\frac{3}{4}$	0 6 $8\frac{3}{4}$	0 6 $8\frac{3}{4}$	0 6 9	0 6 $9\frac{1}{4}$
10	0 13 $4\frac{1}{2}$	0 13 $5\frac{1}{4}$	0 13 $5\frac{1}{2}$	0 13 $5\frac{1}{2}$	0 13 6	0 13 $6\frac{1}{2}$
20	1 6 $9\frac{3}{4}$	1 6 $10\frac{1}{2}$	1 6 11	1 6 $11\frac{3}{4}$	1 7 $0\frac{1}{4}$	1 7 1
30	2 0 $2\frac{3}{4}$	2 0 $3\frac{3}{4}$	2 0 $4\frac{1}{2}$	2 0 $5\frac{1}{2}$	2 0 $6\frac{1}{4}$	2 0 $7\frac{1}{2}$
40	2 13 7	2 13 9	2 13 $10\frac{1}{2}$	2 13 $11\frac{1}{2}$	2 14 $0\frac{3}{4}$	2 14 2
50	3 7 $0\frac{1}{2}$	3 7 $2\frac{1}{4}$	3 7 $3\frac{3}{4}$	3 7 $5\frac{1}{4}$	3 7 $6\frac{1}{4}$	3 7 $8\frac{1}{4}$
60	4 0 $5\frac{1}{4}$	4 0 $7\frac{1}{4}$	4 0 $9\frac{1}{4}$	4 0 $11\frac{1}{2}$	4 1 1	4 1 3
70	4 13 $10\frac{1}{2}$	4 14 $0\frac{3}{4}$	4 14 $2\frac{3}{4}$	4 14 $4\frac{3}{4}$	4 14 $7\frac{1}{4}$	4 14 $9\frac{1}{2}$
80	5 7 $3\frac{1}{4}$	5 7 6	5 7 $8\frac{1}{4}$	5 7 11	5 8 $1\frac{1}{2}$	5 8 4
90	6 0 $8\frac{1}{4}$	6 0 $11\frac{1}{4}$	6 1 2	6 1 $4\frac{3}{4}$	6 1 $7\frac{1}{4}$	6 1 $10\frac{1}{2}$
100	6 14 $1\frac{1}{2}$	6 14 $4\frac{1}{2}$	6 14 $7\frac{1}{2}$	6 14 $10\frac{3}{4}$	6 15 $1\frac{1}{2}$	6 15 5
250	16 15 $3\frac{1}{4}$	16 15 $11\frac{1}{4}$	16 16 7	16 17 $2\frac{3}{4}$	16 17 $10\frac{1}{4}$	16 18 6
400	26 16 $5\frac{1}{2}$	26 17 6	26 18 $6\frac{1}{2}$	26 19 7	27 0 $7\frac{1}{2}$	27 1 8
500	33 10 $6\frac{3}{4}$	33 11 $10\frac{1}{4}$	33 13 2	33 14 $5\frac{3}{4}$	33 15 $9\frac{1}{4}$	33 17 1
750	50 5 10	50 7 $9\frac{3}{4}$	50 9 9	50 11 $8\frac{1}{2}$	50 13 $7\frac{3}{4}$	50 15 $7\frac{1}{2}$
1,000	67 1 $1\frac{3}{4}$	67 3 9	67 6 $4\frac{1}{2}$	67 8 $11\frac{1}{2}$	67 11 $6\frac{1}{2}$	67 14 2

Table of Exchange, No. 2—Pounds Sterling into Rupees.

For values of Rupees from 1s. 3 1/16*d. to* 1s. 3 15/16*d.*

Sterling.	at 1s. 3 1/16d.	at 1s. 3 3/16d.	at 1s. 3 5/16d.	at 1s. 3 7/16d.	at 1s. 3 9/16d.	at 1s. 3 11/16d.
£ s. d.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
0 0 1	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0
0 0 4	0 4 1	0 4 1	0 4 1	0 4 0	0 4 0	0 4 0
0 0 6	0 6 2	0 6 2	0 6 1	0 6 1	0 6 1	0 6 0
0 0 9	0 9 3	0 9 3	0 9 2	0 9 2	0 9 1	0 9 1
0 1 0	0 12 4	0 12 4	0 12 3	0 12 2	0 12 2	0 12 1
0 2 6	1 14 11	1 14 10	1 14 7	1 14 6	1 14 5	1 14 3
0 5 0	3 13 11	3 13 8	3 13 5	3 13 2	3 12 11	3 12 8
0 7 6	5 12 10	5 12 6	5 12 1	5 11 9	5 11 5	5 10 11
0 10 0	7 11 10	7 11 4	7 10 10	7 10 4	7 9 10	7 9 5
1 0 0	15 7 8	15 6 8	15 5 9	15 4 9	15 3 9	15 2 10
5 0 0	77 6 8	77 1 8	76 12 9	76 7 10	76 3 0	75 14 0
10 0 0	154 13 5	154 3 5	153 9 7	152 15 9	152 6 1	151 12 5
25 0 0	387 1 6	385 8 7	383 15 11	382 7 5	380 15 2	379 7 1
30 0 0	464 8 3	462 10 4	460 12 9	458 15 5	457 2 3	455 5 4
50 0 0	774 3 1	771 1 4	768 0 0	764 15 0	761 14 5	758 14 6
75 0 0	1,161 4 7	1,156 9 11	1,151 15 11	1,147 6 5	1,142 13 8	1,138 5 4
100 0 0	1,548 6 2	1,542 2 8	1,536 0 0	1,529 14 1	1,523 12 11	1,517 12 7

For values of Rupees from 1s. 3 3/16*d. to* 1s 4 1/16*d.*

Sterling.	at 1s. 3 3/16d.	at 1s. 3 5/16d.	at 1s. 3 7/16d.	at 1s. 4d.	at 1s. 4 1/16d.	at 1s. 4 3/16d.
£ s. d.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
0 0 1	0 1 0	1 0 0	0 1 0	0 0 11	0 0 11	0 0 11
0 0 4	0 4 0	0 4 0	0 4 0	0 4 0	0 3 11	0 3 11
0 0 6	0 6 0	0 6 0	0 6 0	0 6 0	0 5 11	0 5 11
0 0 9	0 9 0	0 9 0	0 9 0	0 9 0	0 8 11	0 8 11
0 1 0	0 12 1	0 12 0	0 12 0	0 12 0	0 11 11	0 11 11
0 2 6	1 14 2	1 14 1	1 14 0	1 14 0	1 13 10	1 13 9
0 5 0	3 12 5	3 12 2	3 12 1	3 12 0	3 11 10	3 11 9
0 7 6	5 10 7	5 10 3	5 10 1	5 10 0	5 9 9	5 9 7
0 10 0	7 8 11	7 8 5	7 8 2	7 8 0	7 7 9	7 7 6
1 0 0	15 1 10	15 0 11	15 0 5	15 0 0	14 15 6	14 15 0
5 0 0	75 9 5	75 4 8	75 2 4	75 0 0	74 13 7	74 11 3
10 0 0	15 2 10	150 9 4	150 4 8	150 0 0	149 11 3	149 6 7
25 0 0	377 15 2	376 7 5	375 11 8	375 0 0	374 4 2	373 8 6
30 0 0	453 8 8	451 12 2	450 14 1	450 0 0	449 1 11	448 3 11
50 0 0	755 14 5	752 15 0	751 7 5	750 0 0	748 8 7	747 1 3
75 0 0	1,133 13 8	1,129 6 6	1,127 3 2	1,125 0 0	1,122 12 10	1,120 9 10
100 0 0	1,511 12 11	1,505 14 1	1,502 14 11	1,500 0 0	1,497 1 2	1,494 2 7

For values of Rupees from 1s. 4 5/16*d. to* 1s. 4 1/2*d.*

Sterling.	at 1s. 4 5/16d.	at 1s. 4 7/16d.	at 1s. 4 9/16d.	at 1s. 4 11/16d.	at 1s. 4 13/16d.	at 1s. 4 15/16d.
£ s. d.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
0 0 1	0 0 11	0 0 11	0 0 11	0 0 11	0 0 11	0 0 11
0 0 4	0 3 11	0 3 11	0 3 11	0 3 11	0 3 11	0 3 11
0 0 6	0 5 11	0 5 11	0 5 11	0 5 11	0 5 11	0 5 10
0 0 9	0 8 11	0 8 11	0 8 10	0 8 10	0 8 10	0 8 10
0 1 0	0 11 10	0 11 10	0 11 10	0 11 10	0 11 10	0 11 9
0 2 6	1 13 9	1 13 8	1 13 8	1 13 7	1 13 7	1 13 5
0 5 0	3 11 7	3 11 6	3 11 5	3 11 3	3 11 2	3 11 0
0 7 6	5 9 5	5 9 3	5 9 1	5 8 11	5 8 9	5 8 6
0 10 0	7 7 3	7 7 0	7 6 10	7 6 7	7 6 4	7 6 1
1 0 0	14 4 7	14 14 1	14 13 8	14 13 2	14 12 9	14 12 3
5 0 0	74 9 0	74 6 8	74 4 4	74 2 1	73 15 9	73 13 6
10 0 0	149 2 0	148 13 4	148 8 9	148 4 2	147 15 7	147 11 0
25 0 0	372 13 0	372 1 5	371 5 10	370 10 5	369 15 0	369 3 7
30 0 0	447 6 0	446 8 2	445 10 4	444 12 7	443 14 10	443 1 2
50 0 0	745 10 1	744 2 11	742 11 11	741 5 0	739 14 1	738 7 4
75 0 0	1,118 7 1	1,116 4 5	1,114 1 10	1,111 15 5	1,109 13 1	1,107 11 0
100 0 0	1,491 4 2	1,488 5 11	1,485 7 10	1,482 10 0	1,479 12 3	1,476 14 9

Indian Stamp Duties.

	Rs.	a.
Acknowledgment of Debt ex. Rs. 20 ..	0	1
Affidavit or Declaration	1	0
Agreement or Memo. of Agreement,		
(a) If relating to the sale of a bill of exchange	0	2
(b) If relating to sale of a Government security, or share in an incorporated company or other body corporate—Subject to a maximum of Rs. 10, a. 1 for every Rs. 10,000 or part.		
(c) If not otherwise provided for ..	0	8
Appointment in execution of a power ..	15	0
Articles of Association of Company ..	25	0
Articles of Clerkship	250	0
Award, any decision in writing by an Arbitrator, other than by an Order of the Court. Where the value does not exceed Rs. 1,000, same duty as a Bond.		
In any other case	5	0
Bill of Exchange or Promissory Note payable on demand	0	1
Where payable otherwise than on demand but not more than one year after date or sight—Not exc. Rs. 200, a. 3; exc. Rs. 200, not exc. Rs. 400, a. 6; exc. Rs. 400, not exc. Rs. 600, a. 9; exc. Rs. 600, not exc. Rs. 800, a. 12; exc. Rs. 800, not exc. Rs. 1,000, a. 15; exc. Rs. 1,000, not exc. Rs. 1,200, R. 1 a. 2; exc. Rs. 1,200, not exc. Rs. 1,400, R. 1 a. 8; exc. Rs. 1,600, not exc. Rs. 2,500, Rs. 2, a. 4; exc. Rs. 2,500, not exc. Rs. 5,000, Rs. 4 a. 8; exc. Rs. 5,000, not exc. Rs. 7,500, Rs. 6 a. 12; exc. Rs. 7,500, not exc. Rs. 10,000, Rs. 9; exc. Rs. 10,000, not exc. Rs. 15,000, Rs. 13 a. 8; exc. Rs. 15,000, not exc. Rs. 20,000, Rs. 18; exc. Rs. 20,000, not exc. Rs. 25,000, Rs. 22 a. 8; exc. Rs. 25,000, not exc. Rs. 30,000, Rs. 27; and for every add. Rs. 10,000, or part thereof, in excess of Rs. 30,000, Rs. 9.		
Where payable at more than one year after date or sight, same duty as a Bond.		
	Rs.	a.
Bill of Lading	0	4
Bond (not otherwise provided for)—		
Not exc. Rs. 10..	0	2
Exc. Rs. 10, but not exc. Rs. 50 ..	0	4
Exc. Rs. 50, but not exc. Rs. 100 ..	0	8
Up to Rs. 1,000, every Rs. 100 ..	0	8
For every Rs. 500 or part, beyond Rs. 1,000	2	8
Bond, Administration, Customs, Security or Mortgage Deed—For amount not exceeding Rs. 1,000, same duty as a Bond.		

	Rs.	a.
In any other case..	5	0
Cancellation	5	0
Certificate or other Document relating to Shares	0	1
Charter Party	1	0
Cheque	0	1
Composition—Deed	10	0
Conveyance, not being a Transfer—		
Not exceeding Rs. 50	0	8
Exceeding Rs. 50, not exceeding Rs. 100	1	0
For every Rs. 100 in excess of Rs. 100 up to Rs. 1,000	1	0
For every Rs. 500, or part thereof, in excess of Rs. 1,000..	5	0
Copy or Extract—If the original was not chargeable with duty, or if duty with which it was chargeable does not exceed 1 Rupee..	0	8
In any other case	1	0
Counterpart or Duplicate—If the duty with which the original instrument is chargeable does not exceed one rupee —The same duty as is payable on the original. In any other case	1	0
Delivery Order	0	1
Entry in any High Court of an Advocate or Vakil	500	0
In the case of an Attorney	250	0
Instrument—Apprenticeship	5	0
Divorce	1	0
Other than Will, recording an adoption or conferring or purporting to confer Authority to adopt	10	0

Lease—Where rent is fixed and no premium is paid, for less than 1 year, same duty as Bond for whole amount; not more than 3 years, same as Bond for average annual rent reserved; over 3 years, same as Conveyance for consideration equal to amount or value of the average annual rent reserved; for indefinite term, same as Conveyance for a consideration equal to the amount or value of the average annual rent which would be paid or delivered for the first ten years if the lease continued so long; in perpetuity, same as Conveyance for consideration equal to one-fifth of rents paid in respect of first 50 years. Where there is premium and no rent, same as Conveyance for amount of premium; premium with rent, same as Conveyance for amount of premium, and same duty as Lease without premium.

	Rs.	a.
Letter—Allotment of Shares	0	1
Credit	0	1
License	10	0
Memo. of Association of Company—If accompanied by Articles of Association	15	0
If not so accompanied	40	0
Notarial Act	1	0
Note or Memo, intimating the purchase or sale—		
(*a*) Of any Goods exceeding in value Rs. 20	0	2
(*b*) Of any Stock or marketable Security exceeding in value Rs. 20—Subject to a maximum of Rs. 10, a. 1 for every Rs. 10,000, or part.		
Note of Protest by a Ship's Master ..	0	8
Partnership—Where the capital does not exceed Rs. 500	2	8
In any other case	10	0
Dissolution of	5	0
Policy of Insurance—		
(1). *Sea*—Where premium does not exceed rate of 2a., or ½ per cent. of amount insured	0	1
In any other case for Rs. 1,500 or part thereof	0	1
(2). *For time*—For every Rs. 1,000 or part insured, not exc. 6 months ..	0	2
Exceeding 6 and not exceeding 12 months	0	4
If drawn in duplicate, for each part:—Half the above rates, for Sea and Time.		
(3). *Fire*—When the sum insured does not exceed Rs. 5,000..	0	8
In any other case	1	0
In respect of each receipt for any payment of a premium on any renewal of an original policy—One half of the duty payable in respect of the original policy in addition to the amount, if any, chargeable under Art. 53 (*Receipt*).		
(4). *Accident and Sickness*—Against Railway accident, valid for a single journey only	0	1
In any other case—for the maximum amount which may become payable in the case of any single accident or sickness where such amount does not exceed Rs. 1,000, and also where amount exc. Rs. 1,000, for every Rs. 1,000 or part	0	2
(5). *Life, or other Insurance, not specifically provided for*—		
For every sum insured not exceeding Rs. 250	0	2
For every sum insured exceeding Rs. 250 but not exceeding Rs. 500	0	4
For every sum of Rs. 1,000 in excess of Rs. 500	0	6
If drawn in duplicate, for each part—		
Half the above rates.		

	Rs.	a.
In case of a re-insurance by one Company with another—¼ of duty payable in respect of the original insurance, but not less than 1 anna, or more than 1 R.		
Power of Attorney—		
For the sole purpose of procuring the registration of one or more documents in relation to a single transaction or for admitting execution of one or more such documents	0	8
When required in suits or proceedings under the Presidency Small Causes Courts Act, 1882	0	8
Authorising 1 person or more to act in a single transaction other than that mentioned above	1	0
Authorising not more than 5 persons to act jointly and severally in more than 1 transaction, or generally ..	5	0
Authorising more than 5 but not more than 10 persons to act	10	0
When given for consideration and authorising the Attorney to sell any immovable property—The same duty as a *Conveyance* for the amount of the consideration.		
In any other case, for each person authorised	1	0
Protest of Bill or Note	1	0
Proxy	0	1
Receipt for value exc. Rs. 20	0	1
Shipping Order	0	1
Surrender of Lease—When duty with which lease is chargeable does not exceed Rs. 5 :—The duty with which such Lease is chargeable.		
In any other case	5	0
Transfer of Shares—One Half of the duty payable on a Conveyance for a consideration equal to the value of the share.		
Transfer of any Interest secured by a Bond, Mortgage-deed, or Policy of Insurance—If duty on such does not exceed Rs. 5—The duty with which such Bond, &c., is chargeable.		
In any other case	5	0
Transfer of Lease by way of assignment and not by way of under-lease—The same duty as a conveyance for a consideration equal to the amount of the consideration for the transfer.		
Trust, Declaration of—Same duty as a Bond for a sum equal to the amount or value of the property concerned, but not exceeding	15	0
Revocation of—Ditto, but not exceeding	10	0
Warrant for Goods..	0	4

FOREIGN MONEYS, AND THEIR ENGLISH EQUIVALENTS.

FULL EXCHANGE VALUES.

	£	s.	d.
America—(United States) Eagle ..	2	1	1
Dollar of 100 Cents ..	0	4	2
Cent	0	0	0½
Argentine.—Peso	0	3	11½
Austria—Silver Crown	0	0	10
10 Kreutzers or 20 Hellers ..	0	0	2
Belgium—Gold Ten-Franc Piece ..	0	7	11½
Silver Five Franc	0	3	11½
„ Franc	0	0	9½
Chilian. Peso	0	1	6
Denmark, Norway and Sweden—Krone 100 Ore—1 Krone.	0	1	1½
Egypt—£E of 100 Piastres	1	0	3¾
One Piastre .. (about) .	0	0	2½
France—Gold Twenty-Franc Piece .	0	15	10½
Silver Five-Franc Piece	0	3	11½
Franc	0	0	9½
Germany—(New Coinage).—			
Gold 20-Mark Piece	0	19	7
„ 10 „ „	0	9	9½
Silver 5 „ „	0	4	10⅝
„ 1 „ „	0	0	11⅞
„ ½ „ „	0	0	5⅞
2 Thaler Pieces	0	5	10½
1 „ Piece	0	2	11½
Greece—Twenty-Drachmai Gold Piece	0	15	10
One Drachma (silver)	0	0	9½
Holland—Ten Florins (Gulden) ..	0	16	8
Florin (Gulden)	0	1	8

	£	s.	d.
India—1 Rupee (varying in value)	0	1	4
½ „ „	0	0	8
¼ „ „	0	0	4
Since 1899 the Sovereign has been legal tender at the ratio of 15 rupees to the £ sterling (=1*s.* 4*d.* the rupee).			
Italy—Gold 20-Lire Piece	0	15	10
„ 5 „	0	3	11½
One Lira (Silver)	0	0	9½
Japan—Gold 20 Yen Pieces ..	2	0	11½
Silver 50 Sen Pieces	0	1	0$\frac{9}{32}$
Value in exchange—1 Yen=100 Sen=	2	0	0$\frac{25}{32}$
Peru.—Sol, Silver	0	2	0
Portugal—Gold Milreis	0	4	5½
Silver Half Milreis	0	2	2¾
100 Reis	0	0	5½
Russia—Half Imperial	0	15	9$\frac{27}{32}$
Silver Rouble	0	2	1$\frac{7}{16}$
Ten Kopecks	0	0	1$\frac{13}{16}$
Spain—(Gold)—25 Pesetas	0	19	9¾
(Silver)—5 Pesetas	0	3	11½
2 „	0	1	6¾
1 Pesta	0	0	9½
The Peseta=100 Centimos. (*Centimes*).			
Switzerland—Gold 20-Franc Piece ..	0	15	10½
Silver 5-Franc Piece	0	3	11½
„ Franc	0	0	9½
Turkey—Gold Medjidié	0	18	0¾
Silver Mejidié	0	3	7
Piastre	0	0	2½

ECLIPSES IN 1918.

Of the SUN, Two; of the MOON, One.

I. June 8-9. Total Eclipse of the Sun. Path of Total Eclipse passes over Borodina Isles Chehalis, Denver and the N.W. of the Bahamas. Partial Eclipse visible in the Arctic regions, the N E. of China and Siberia, in Japan, the Pacific, N. and Central America, the extreme N.W. of S. America and the Western Atlantic.

	d. h. m.			*Long.*	*Lat.*
Eclipse begins	8	7 29	p.m. in	150° E	16° N
Central Eclipse begins ..	8	8 32	„ „	130° E	26° N
Central Eclipse ends	11	43	„ „	75° W	25° N
Central Eclipse ends	9	0 46	a.m. „	95° W	16° N

	d. h. m.		*h. m.*
At Montreal begins	8	5 27 p.m.,	ends 7 9p.m

(Easter Time.)

II. June 24. Partial Eclipse of the Moon. Visible in N. and S. America, the Pacific and Australia.

	h. m.	
Moon enters shadow	9 46	a.m.
„ leaves „	11 10	„

III. December 3. Annular Eclipse of the Sun. The line of Annular Eclipse passes over the E. of the Pacific, Santiago de Chile Buenos Ayres the S. Atlantic to Angola. Partial Eclipse visible in the Eastern Pacific, S. America (except the northern part) the S. Atlantic and Africa, S. and W. of a line from Sierra Leone through Sokoto and Beira.

	h. m.			*Long.*	*Lat.*
Eclipse begins .	0	21	p.m. in	100° W	6° S
Central Eclipse begins ..	1	29	„ „	119° W	11° S
Central Eclipse ends	5	15	„ „	15° E	15° S
Central Eclipse ends	6	22	„ „	4° W	10° S

	h. m.			
At Cape Town begins ..	5	57	p.m.	African Time.
At Johannesburg „ ..	6	4	„	

Wild Animals and Snakes.

The number of persons killed by wild animals in British India in 1915 was 1,923. The number killed in the previous year was 1,702. As in 1914 the highest total of deaths in any one province (684) is reported from Bihar and Orissa, where **tigers** alone killed 376 persons. In the three districts of Angul, Hazaribagh and Singhbhum there were 232 deaths from tigers and the offer of special rewards for man-eaters in part of these districts is said to have had no effect. Altogether 748 persons were destroyed by tigers in British India, a total which compares unfavourably with the corresponding figure of 646 for 1914. In the United Provinces one man-eating tiger in the Almora district killed 10 persons out of the provincial total of 20; and in the Punjab two deaths are reported which are the first caused by tigers in that province for seven years.

The total number of **deaths from snakebite** among human beings rose from 22,900 in 1914 to 26,385 in 1915. An increase is noticeable in all provinces except Madras and the North-West Frontier Province. As usual the casualties were most numerous in Bihar and Orissa (6,795), the United Provinces (6,629) and Bengal (4,709). The deaths reported from the Punjab under this head amount to 1,590, which is the highest figure yet recorded for that province. Special measures organised in the districts of Gujranwala and Sialkot resulted in the destruction of nearly 10,000 snakes. In the Bombay Presidency nearly 80,000 venomous snakes were destroyed in the Ratnagiri district, where deaths from snake-bite are more numerous than anywhere else in the Presidency. Sir Lauder Brunton's lancets are said to have effected a fair number of cures in cases in which they were used but on the whole the information furnished in these reports is not sufficient for a definite verdict on the efficacy of the instrument.

The number of **wild animals destroyed** during the year under review was 25,036 including 1,532 tigers, 6,623 leopards, 2,775 bears and 2,191 wolves. A sum of Rs. 1,89,409 was paid in rewards. The total number of snakes destroyed was 1,84,663 as compared with 1,18,816 in 1914. Rs. 18,214 were disbursed altogether in rewards for the destruction of snakes.

The number of fresh **licenses** issued under the Indian Arms Act, 1878, in forms XVI, XVII and XVIII was 28,123 as compared with 23,016 in 1914. The total number of licenses in force in the year under review was 175,890 against 176,779 in the preceding year.

The compilation of the returns showing the number of **cattle** destroyed by wild animals and snakes has involved in the past an amount of labour disproportionate to the interest of the subject, and the accuracy of the returns themselves has always been open to question. The Government of India have therefore decided that the submission of these returns should be discontinued.

TIDAL CONSTANTS.

The approximate standard time of High Water may be found by adding to, or subtracting from, the time of High Water at London Bridge, given in the calendar, the corrections given as below:—

		H.	M.			H.	M.
Gibraltar	*sub.*	0	32	Rangoon River Entrance	*add*	1	35
Malta	*add*	1	34	Penang	*sub.*	1	39
Karachi	*sub.*	2	33	Singapore	„	3	25
Bombay	„	1	44	Hongkong	„	4	27
Goa	„	2	44	Shanghai	„	0	34
Point de Galle	*add*	0	12	Yokohama	*add*	3	6
Madras	*sub.*	5	6	Valparaiso	*sub.*	4	40
Calcutta	*sub.*	0	19	Buenos Ayres	*add*	4	0
Rangoon Town	*add*	2	41	Monte Video	„	0	32

Indian Time.

For many years Indian time was in a state of chaotic confusion. What was called Madras or Railway time was kept on all the railways: and each great centre of population kept its own local time, which was not based on any common scientific principle and was divorced from the standards of all other countries. It was with a view to remedying this confusion that the Government of India took the matter up in 1904, and addressed to the Local Governments, and through them to all local bodies, a long letter which reviewed the situation and made suggestions for the future. The essential points in this letter are indicated below:

"In India we have already a standard time, which is very generally, though by no means universally, recognised. It is the Madras local time, which is kept on all railway and telegraph lines throughout India and which is 5h. 21m. 10s. in advance of Greenwich. Similarly, Rangoon local time is used upon the railways and telegraphs of Burma, and is 6h. 24m. 47s. ahead of Greenwich. But neither of these standards bears a simple and easily remembered relation to Greenwich time.

"The Government of India have several times been addressed by Scientific Societies, both in India and in England, and urged to fall into line with the rest of the civilised world. And now the Royal Society has once more returned to the attack. The Committee of that Society which advises the Government of India upon matters connected with its observatories, writes:—'The Committee think that a change from Madras time to that corresponding to a longitude exactly 5½ hours east of Greenwich would be an improvement upon the existing arrangements; but that for international scientific purposes the hourly zone system, making the time 5 hours in advance of Greenwich in the west, and 6 hours in advance in the east of India, would be preferable.'

'Now if India were connected with Europe by a continuous series of civilised nations with their continuous railway systems all of which had adopted the European hour-zone system, it would be imperative upon India to conform and to adopt the second suggestion. But as she is not, and as she is as much isolated by uncivilised States as Cape Colony is by the ocean, it is open to her to follow the example of that and some other similarly situated colonies and to adopt the first suggestion.

"It is believed that this will be the better solution. There are obvious objections to drawing an arbitrary line right across the richest and most populous portions of India, and so as to bisect all the main lines of communication, and keeping times differing by an hour on opposite sides of that line. India has become accustomed to a uniform standard in the Madras time of the railways; and the substitution for it of a double standard would appear to be a retrograde step; while it would, in all probability, be strongly opposed by the railway authorities. Moreover, it is very desirable that whatever system is adopted should be followed by all Europeans and Indians alike; and it is certain that the double standard would puzzle the latter greatly; while by emphasising the fact that railway differed from local time, it might postpone or even altogether prevent the acceptance of the former instead of the latter by people generally over a large part of India. The one great advantage which the second possesses over the first alternative is, that under the former, the difference between local and standard time can never exceed half an hour; whereas under the latter it will even exceed an hour in the extreme cases of Karachi and Quetta. But this inconvenience is believed to be smaller than that of keeping two different times on the Indian system of railways and telegraphs.

"It is proposed, therefore, to put on all the railway and telegraph clocks in India by 8m. 50s. They would then represent a time 5½ hours faster than that of Greenwich, which would be known as **Indian Standard Time**: and the difference between standard and local time at the places mentioned below would be approximately as follows, the figures representing minutes, and F. and S. meaning that the standard time is in advance of or behind local time respectively:—Dibrugarh 51 S., Shillong 38 S., Calcutta 24 S., Allahabad 2 F., Madras 9 F., Lahore 33 F., Bombay 39 F., Peshawar 44 F., Karachi 62 F., Quetta 62 F.

"This standard time would be as much as 54 and 55 minutes behind local time at Mandalay and Rangoon, respectively; and since the railway system of Burma is not connected with that of India, and already keeps a time of its own, namely, Rangoon local time, it is not suggested that Indian Standard Time should be adopted in Burma. It is proposed, however, that instead of using Rangoon Standard Time as at present, which is 6h. 24m. 47s. in advance of Greenwich, a Burma Standard Time should be adopted on all the Burmese railways and telegraphs, which would be one hour in advance of Indian Standard Time, or 6½ hours ahead of Greenwich time, and would correspond with 97° 30′ E. longitude. The change would bring Burma time into simple relation, both with European and with Indian time, and would (among other things) simplify telegraphic communication with other countries.

"Standard time will thus have been fixed for railways and telegraphs for the whole of the Indian Empire. Its general adoption for all purposes, while eminently advisable, is a matter which must be left to the local community in each case."

It is difficult to recall, without a sense of bewilderment, the reception of this proposal by various local bodies. To read now the fears that were entertained if Standard Time was adopted is a study in the possibilities of human error. The Government scheme left local bodies to decide whether or not they would adopt it. Calcutta decided to retain its own local time, and to-day Calcutta time is still twenty-four minutes in advance of Standard Time. In Bombay the first reception of the proposal was hostile; but on reconsideration the Chamber of Commerce decided in favour of it and so did the Municipality. Subsequently the opposing element in the Municipality brought in a side resolution, by which the Municipal clocks were put at Bombay time which is thirty-nine minutes behind Standard Time. On the 1st January 1906 all the railway and telegraph clocks in India were put at Indian Standard Time; in Burma the Burma Standard Time became universal. Calcutta retains its former Calcutta time; but in Bombay local time is retained only in the clocks which are maintained by the Municipality and in the establishments of some orthodox Hindus. Elsewhere Standard Time is universal.

The Calendars.

A full Calendar will be found at the beginning of this book. Below are given details of the other Calendars in use in India.

The *Jewish* Calendar is in accordance with the system arranged A.D. 358. The Calendar dates from the Creation, which is fixed as 3,760 years and 3 months before the beginning of the Christian Era; the year is Luni-solar.

The *Mohammedan*, or era of the Hejira, dates from the day after Mahomet's flight from Mecca, which occurred on the night of July 15, 622 A.D. The months are Lunar.

The *Fasli* year was derived from a combination of the Hejira and Samvat years by the order of Akbar; it is Luni-solar. The *Bengali* year seems also to have been related at one time to the Hejira, but the fact of its being Solar made it lose 11 days each year.

The *Samvat* era dates from 57 B.C., and is Luni-solar. The months are divided into two fortnights—*sudi*, or bright, and *badi*, or dark. Each fortnight contains 15 tithis, which furnish the dates of the civil days given in our calendars.

PUBLIC HOLIDAYS IN 1918.

Parsee (Shehenshahi).

Jamshedji Naoroz	March	21
Avan Jashan	April	18
Adar Jashan	May	17
Zarthost-no-diso	June	18
Gatha Gahambars	August	8 & 9
Parsee New Year	Sept.	10 & 11
Khordad Sal	„	16

Parsee (Kadmi).

Avan Jashan	March	19
Jamshedji Naoroz	„	21
Adar Jashan	April	17
Zarthost-no-diso	May	19
Gatha Gahambars	August	9 & 10
Parsee New Year	„	11 & 12
Khordad Sal	„	17

Mahomedan (Sunni).

Shab-e-Bara	May	27
Ramzan 'Id	July	11
Mohurrum	October	15
Bara Wafat	December	17
Mahim Fair	„	19

Mahomedan (Shiah).

Id-e-Maviud	January	1
Shahadat-i-Huzrat Ali	June	30
Ramzan-Id	July	11
Bakri 'Id	September	16
Mohurrum	October	15
Shahadat-e-Imam Husan	December	2
d-e-Moulud	„	22

Hindu.

Makar Sankrant	January	14
Maha Shivratri	March	11
Holi	„	28
Ramnavami	April	19
Cocoanut Day	August	21
Gokal Ashtami	„	28
Ganesh Chaturthi	September	9
Dassera	October	14
Divali	November	2
	„	3
	„	4

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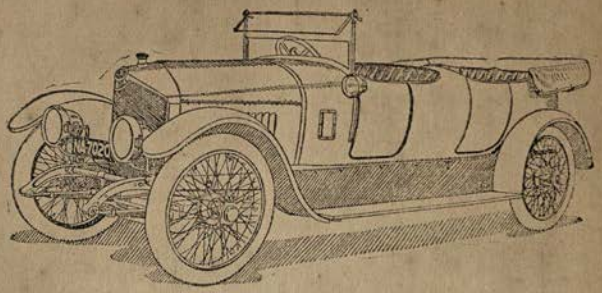

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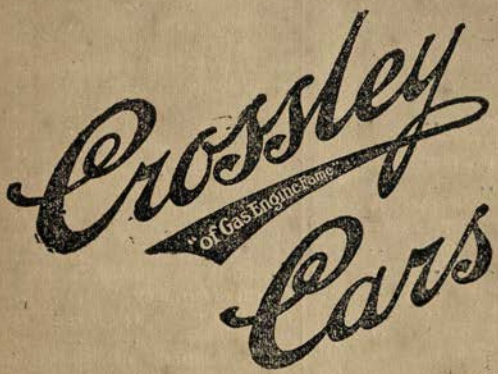

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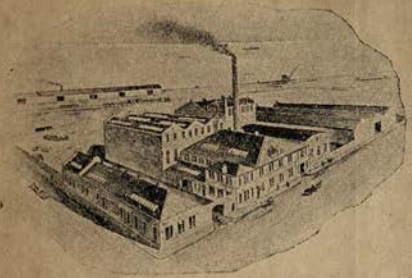

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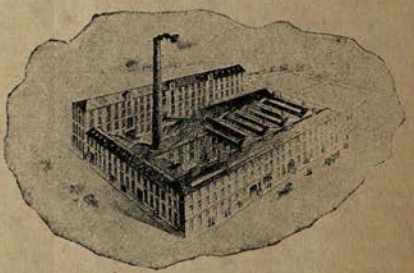

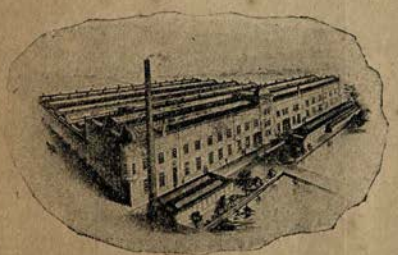

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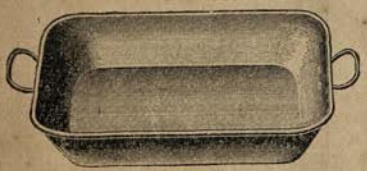

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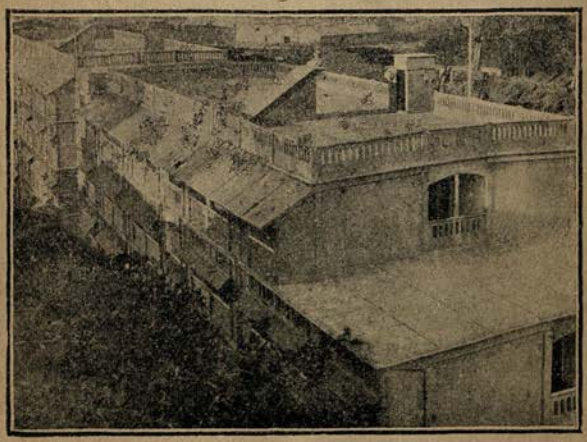

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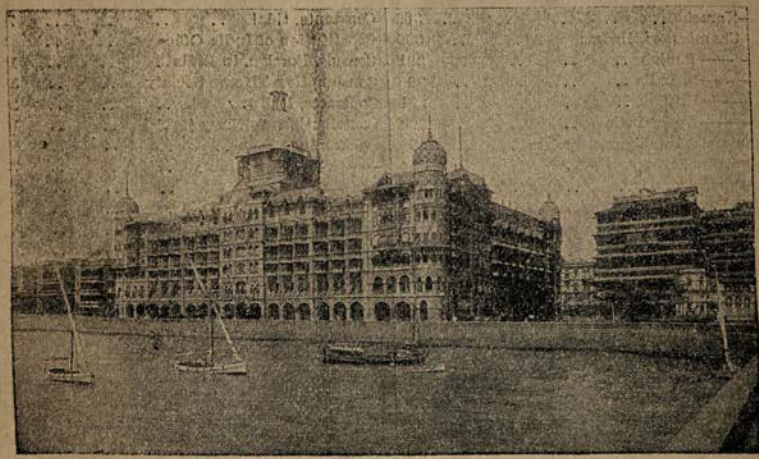

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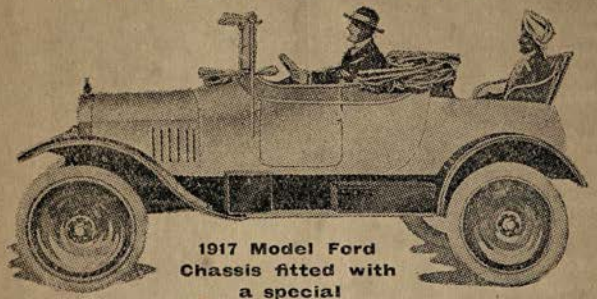

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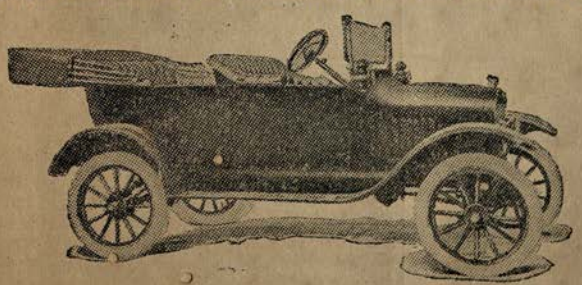

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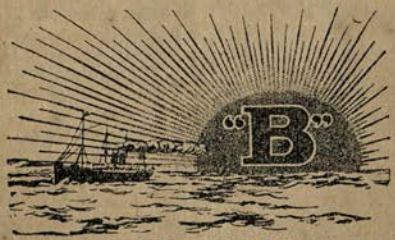
Registered 

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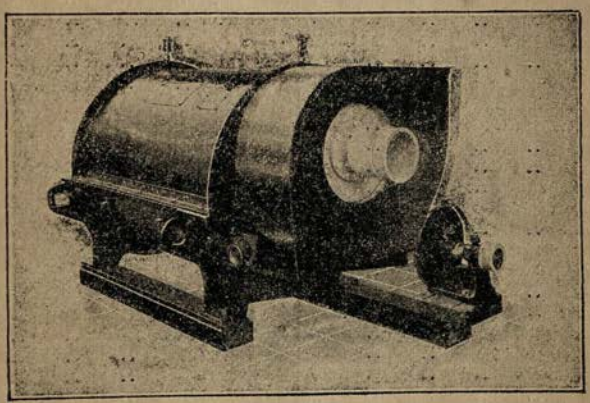

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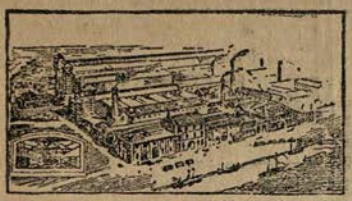

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